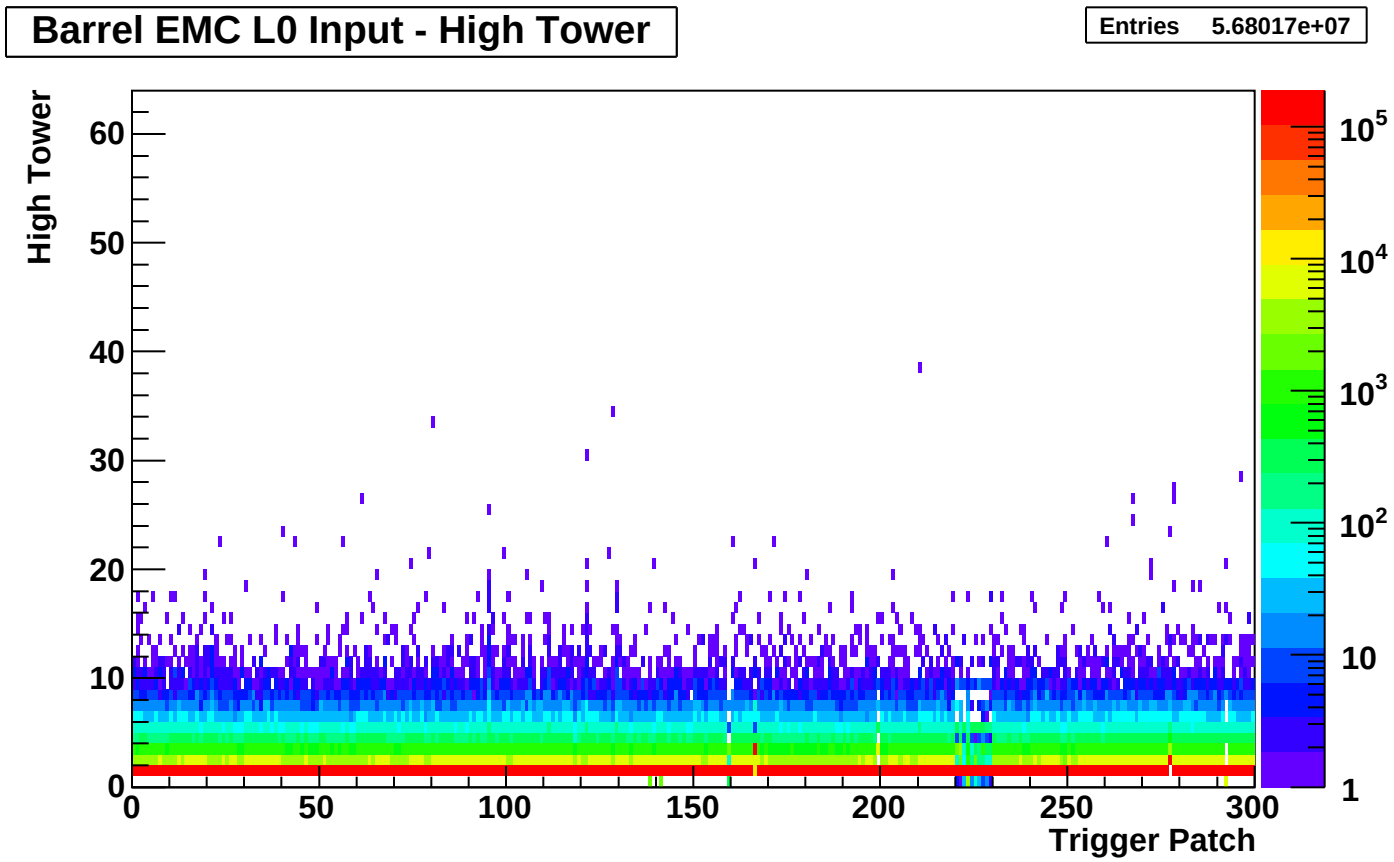
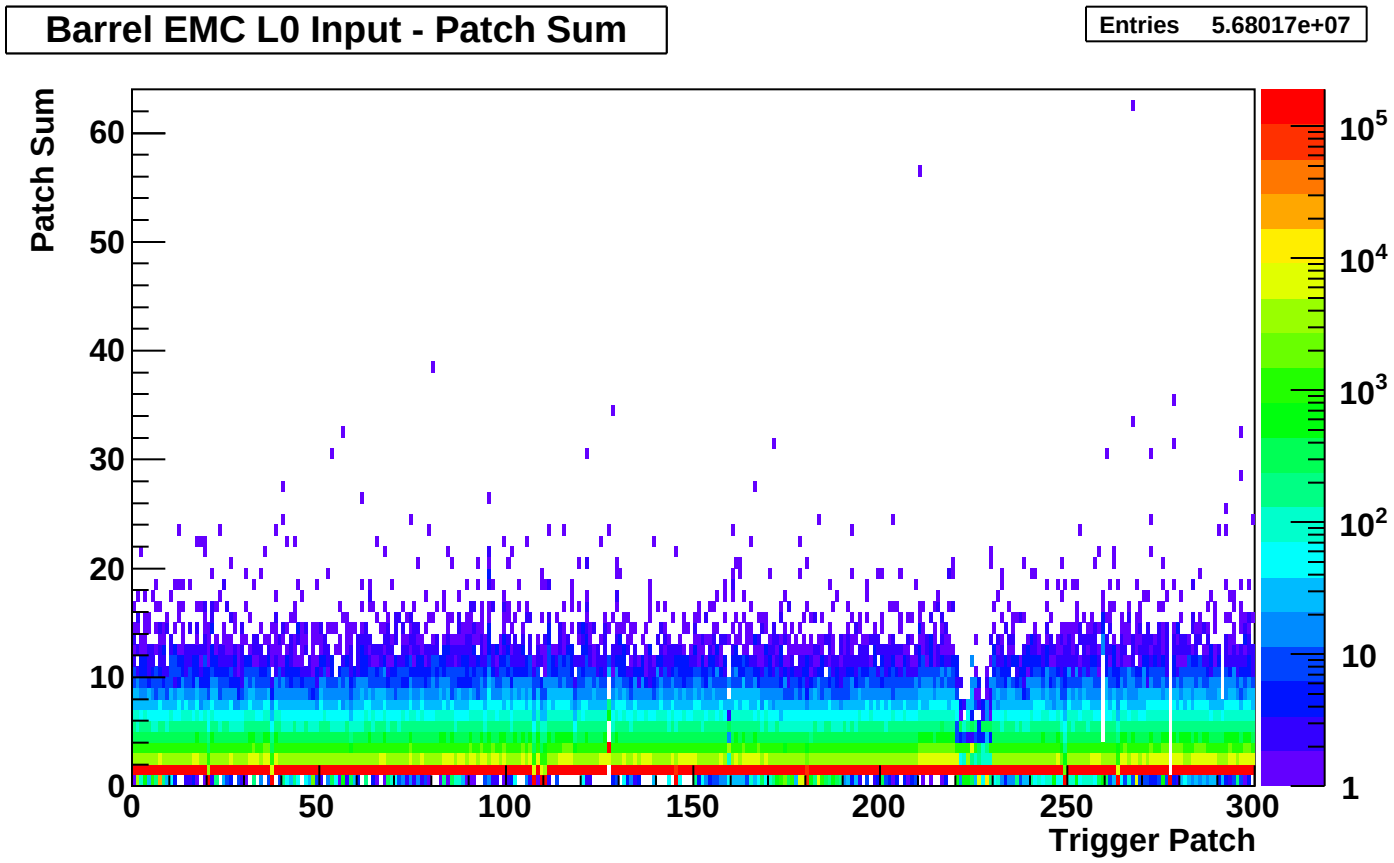
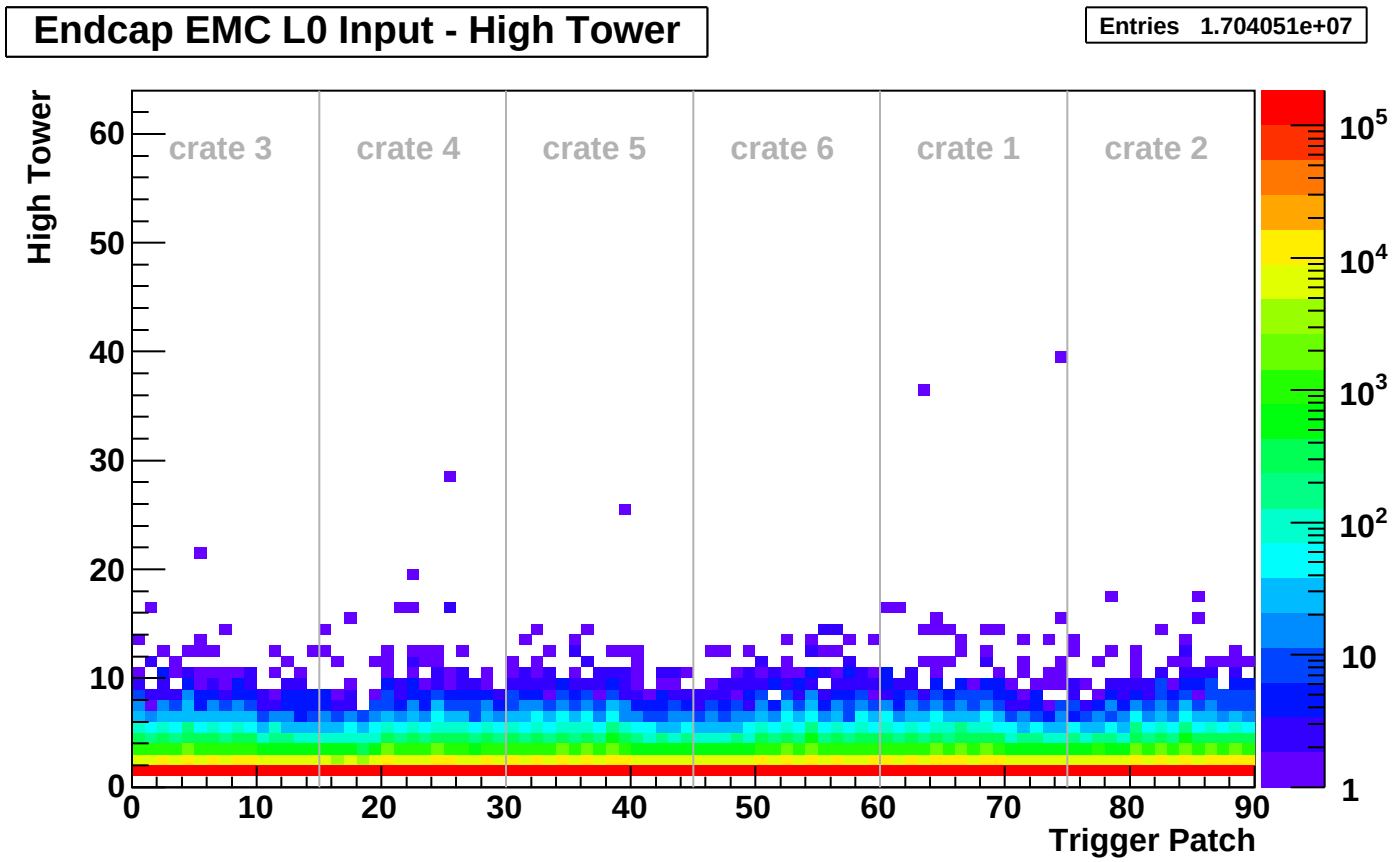
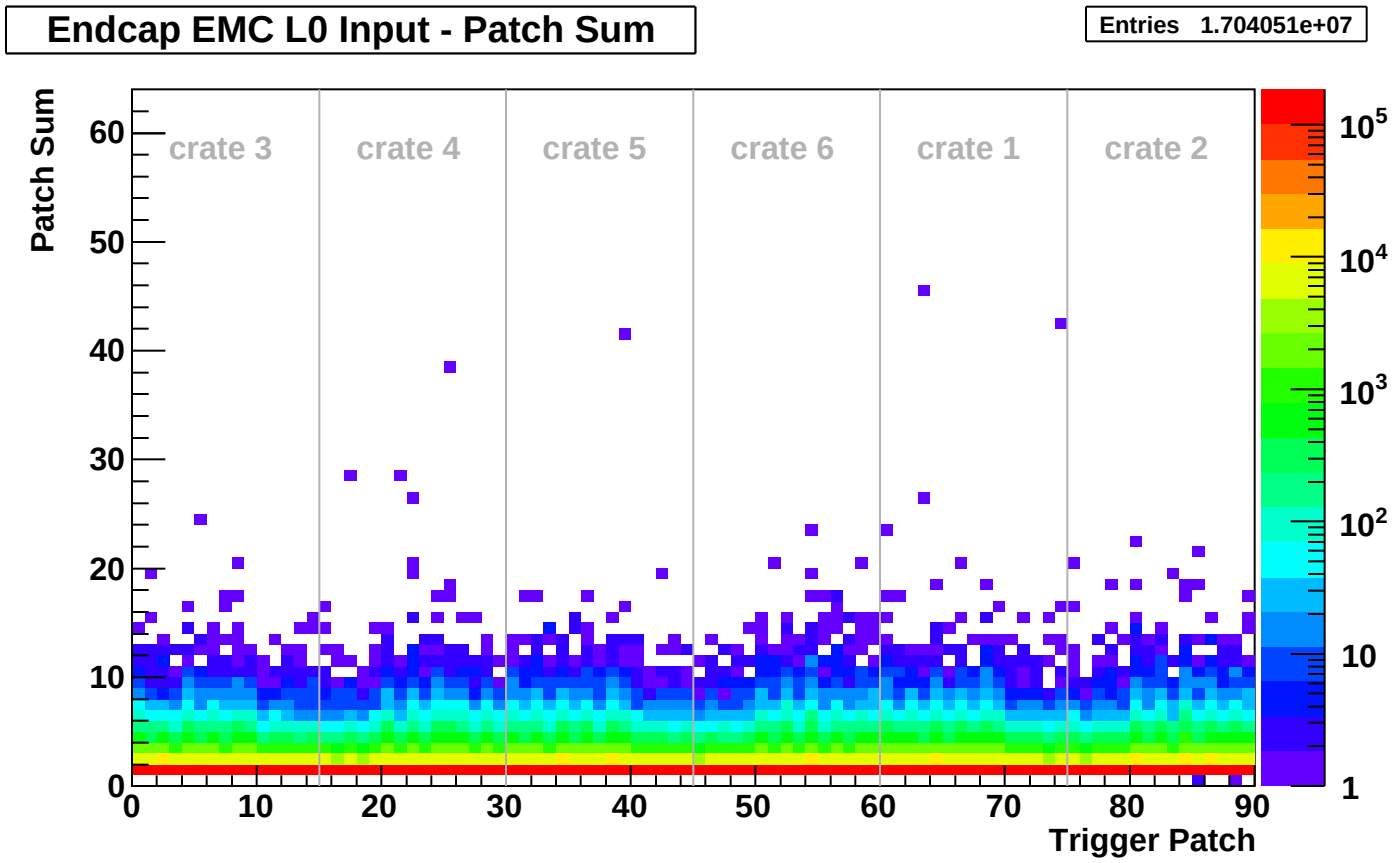
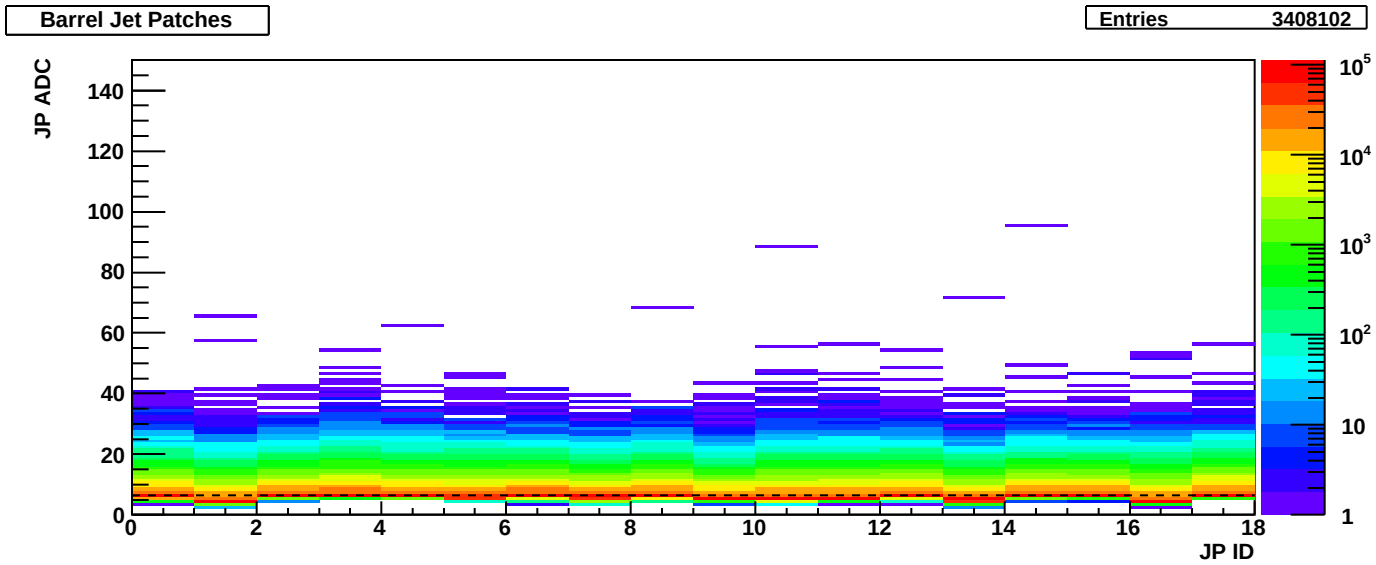
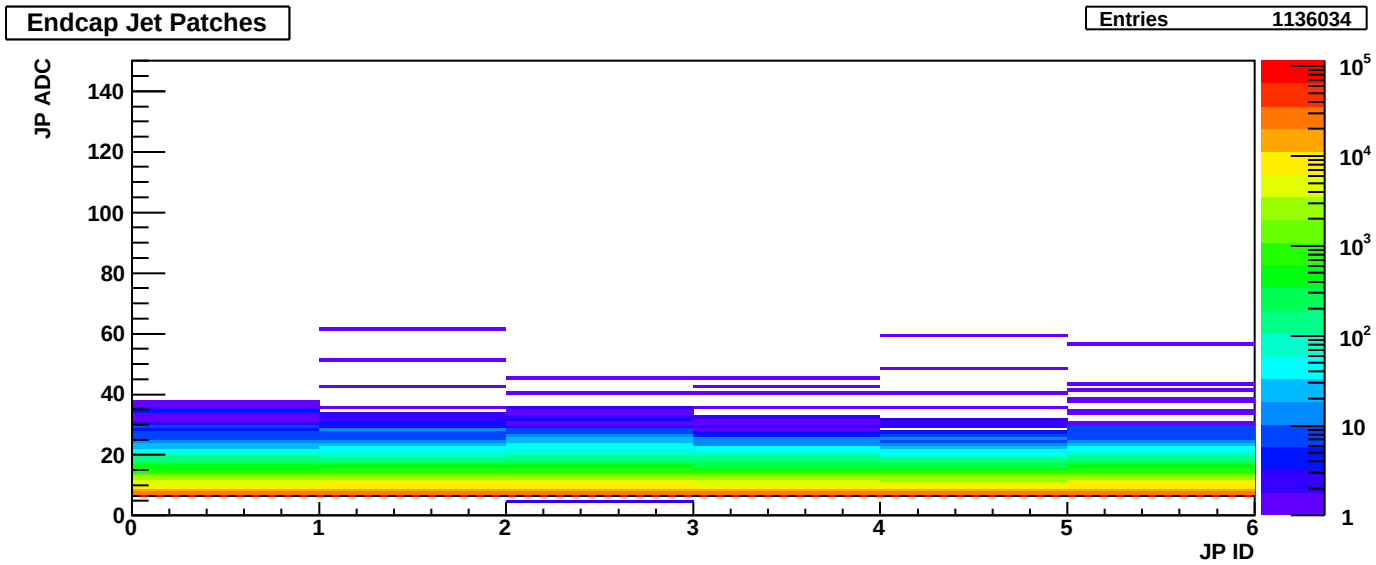

Barrel EMC L0 Input - High Tower
Entries 5.68017e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

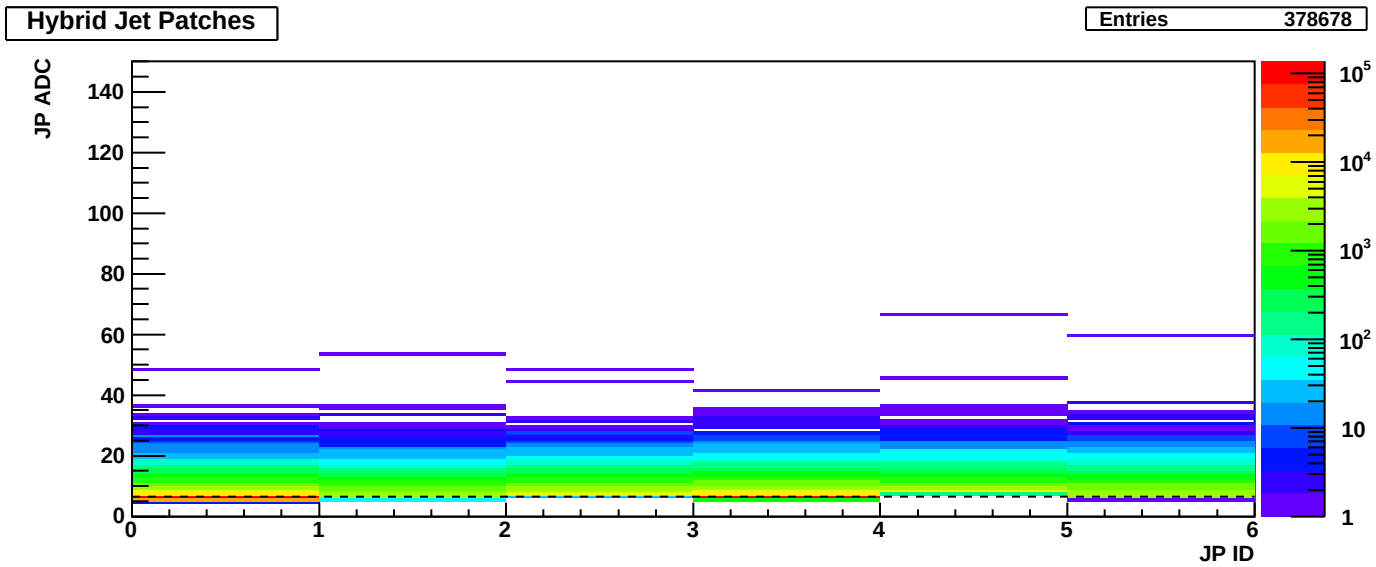

Barrel EMC L0 Input - Patch Sum
Entries 5.68017e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

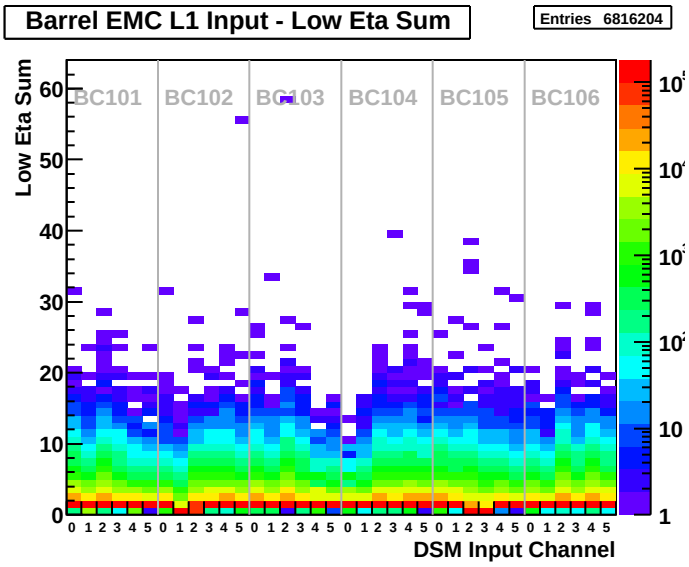

Endcap EMC L0 Input - High Tower
Entries 1.704051e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

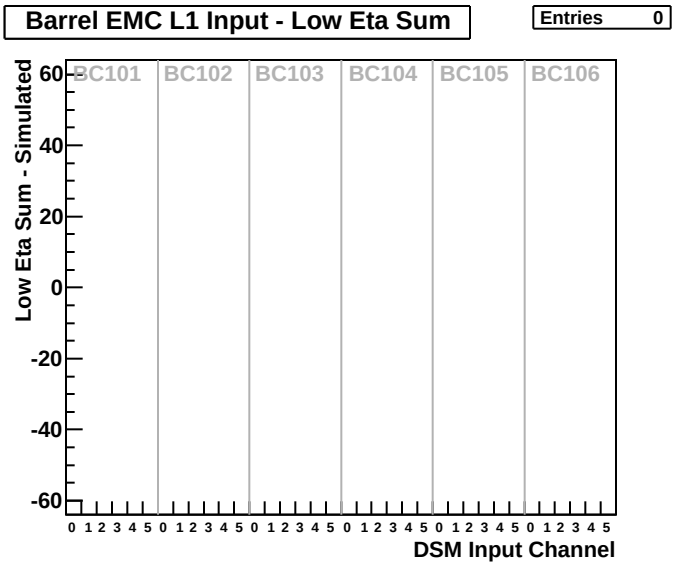

Endcap EMC L0 Input - Patch Sum
Entries 1.704051e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

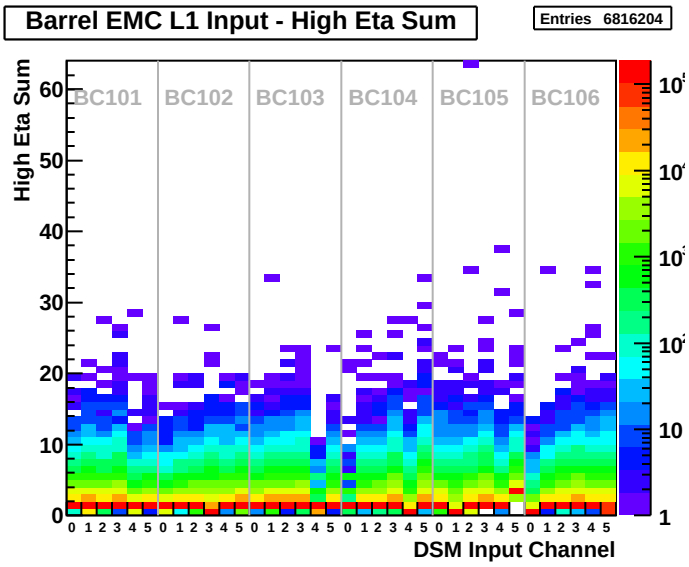

Barrel Jet Patches
Entries 3408102
JP ADC
JP ID

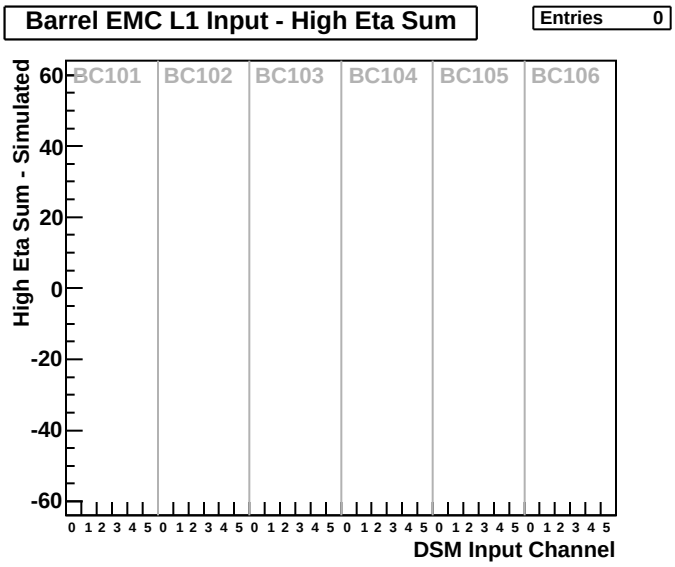

Endcap Jet Patches
Entries 1136034
JP ADC
JP ID

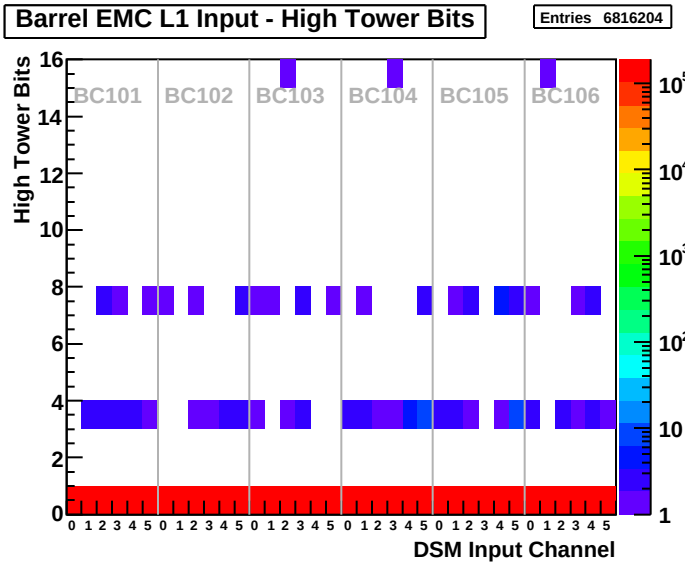

Hybrid Jet Patches
Entries 378678
JP ADC
JP ID

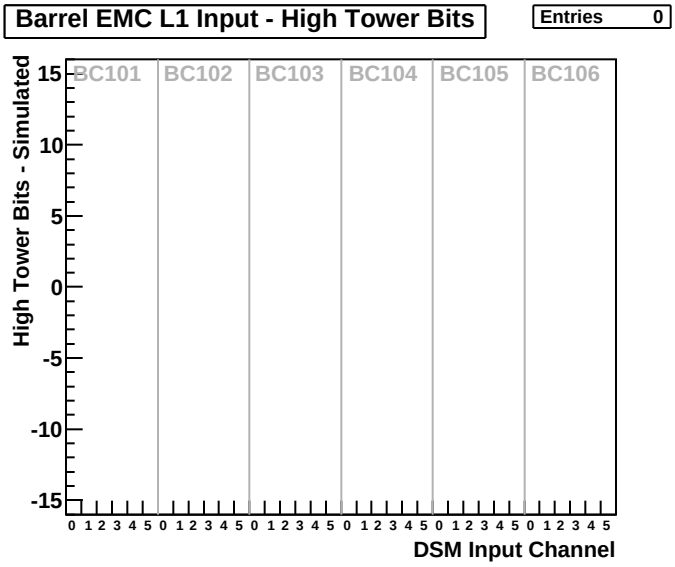

Barrel EMC L1 Input - Low Eta Sum
Entries 6816204
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

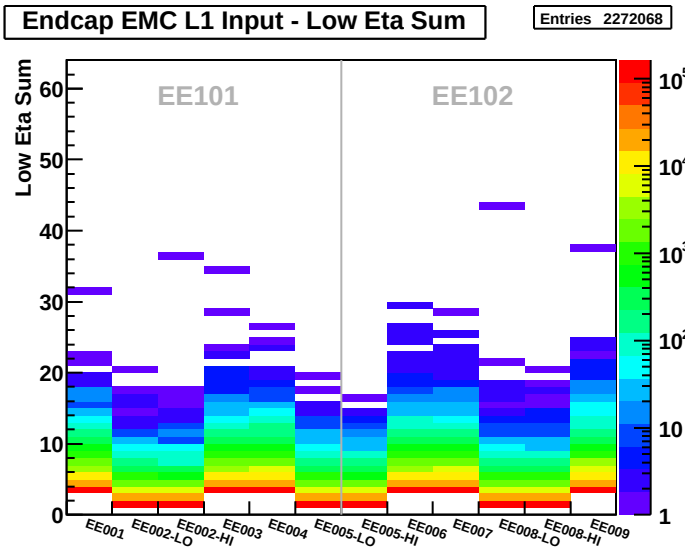

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

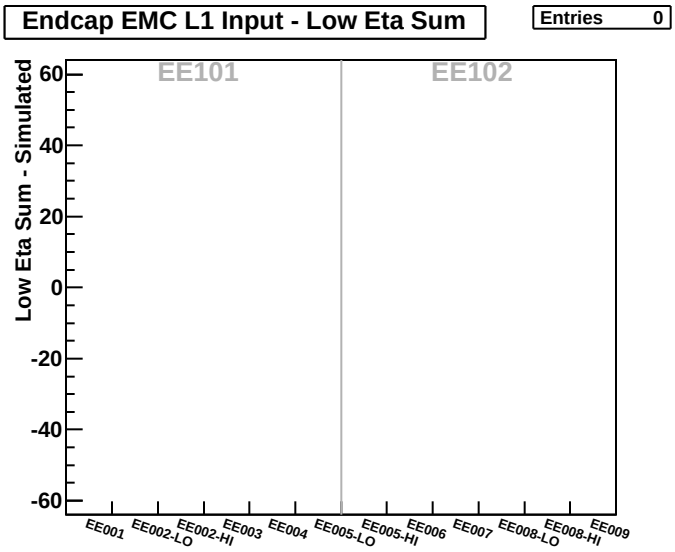

Barrel EMC L1 Input - High Eta Sum
Entries 6816204
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

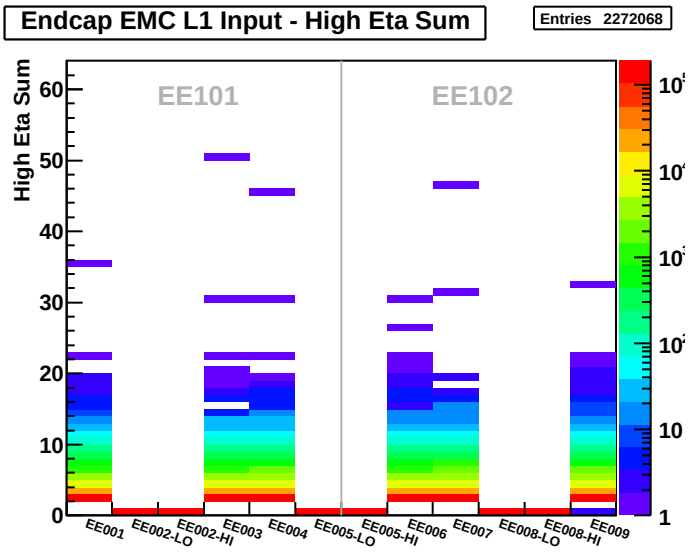

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

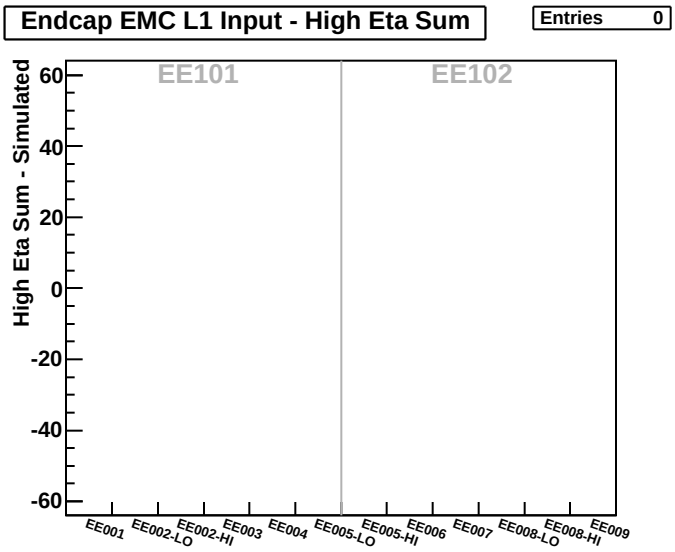

Barrel EMC L1 Input - High Tower Bits
Entries 6816204
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

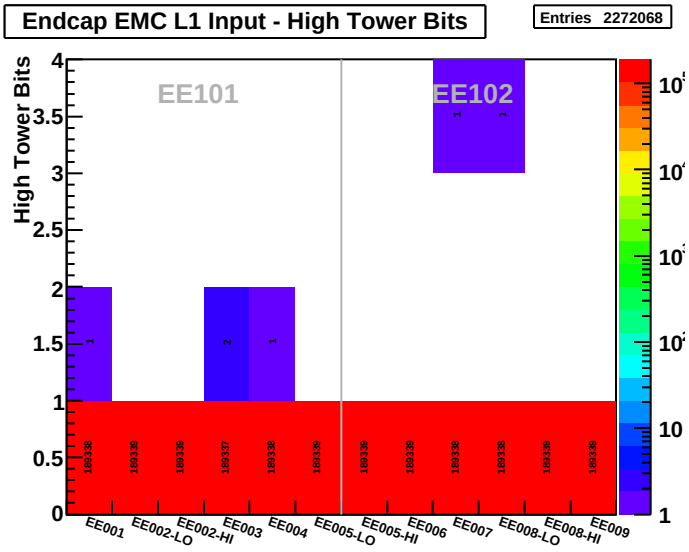

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

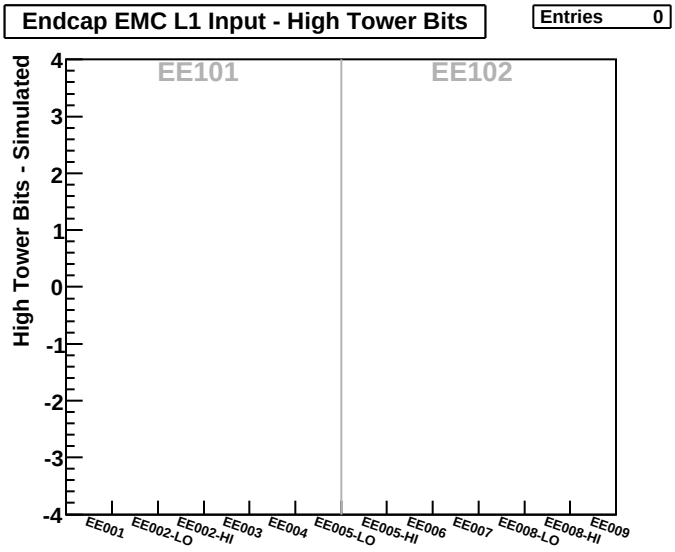

Endcap EMC L1 Input - Low Eta Sum
Entries 2272068
Low Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

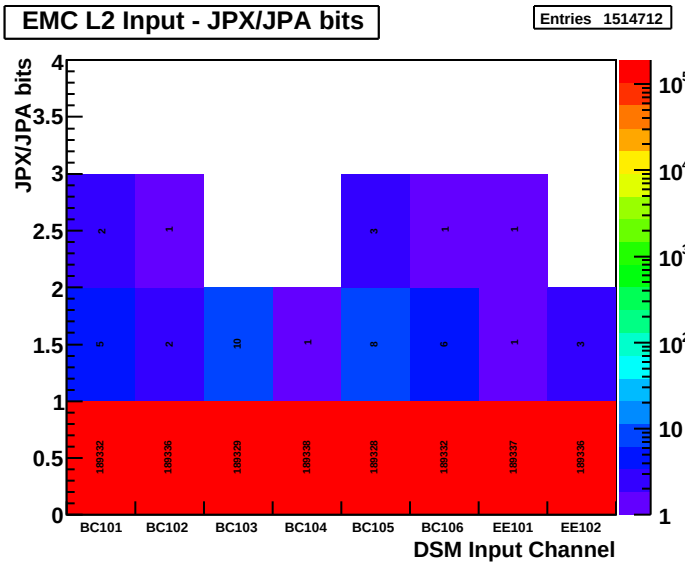

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

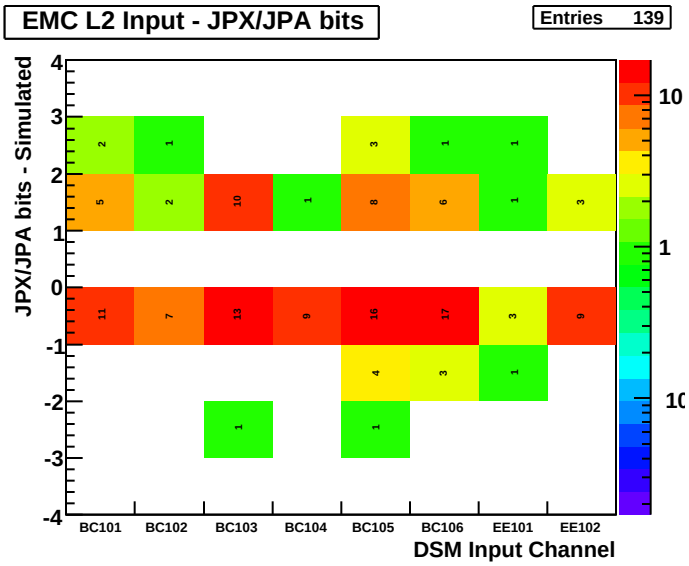

Endcap EMC L1 Input - High Eta Sum
Entries 2272068
High Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

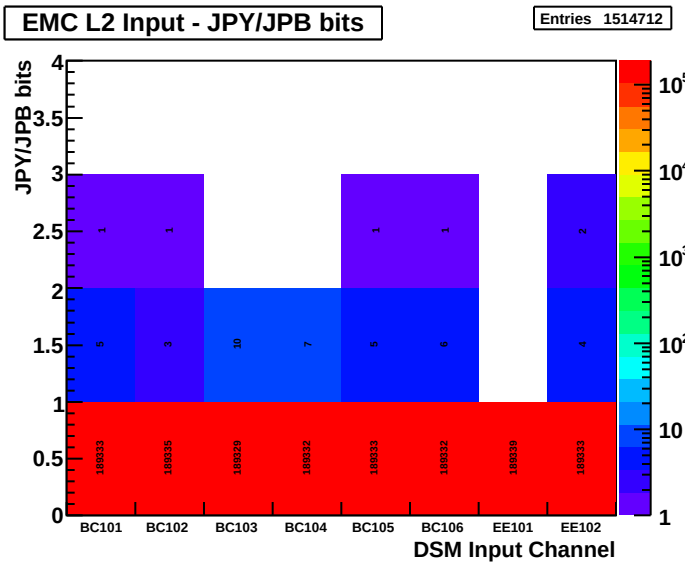

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

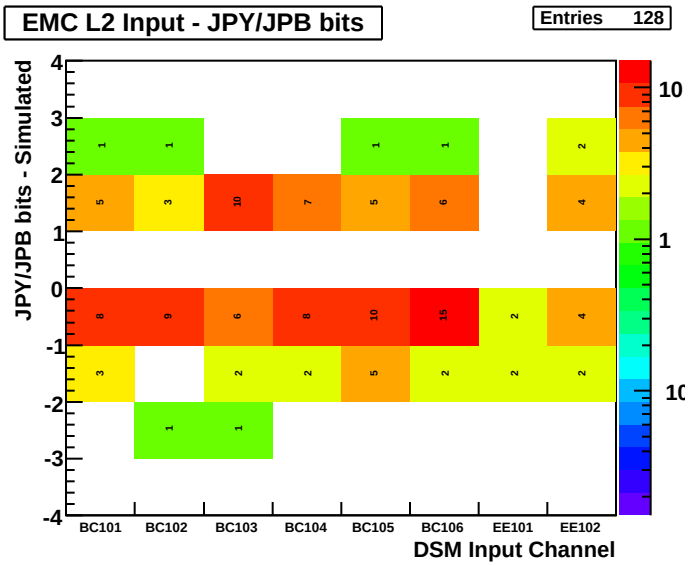

Endcap EMC L1 Input - High Tower Bits
Entries 2272068
High Tower Bits
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

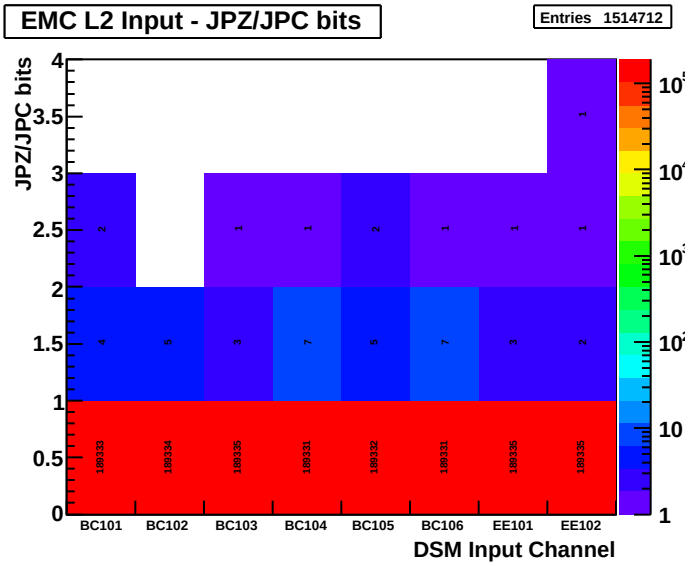

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

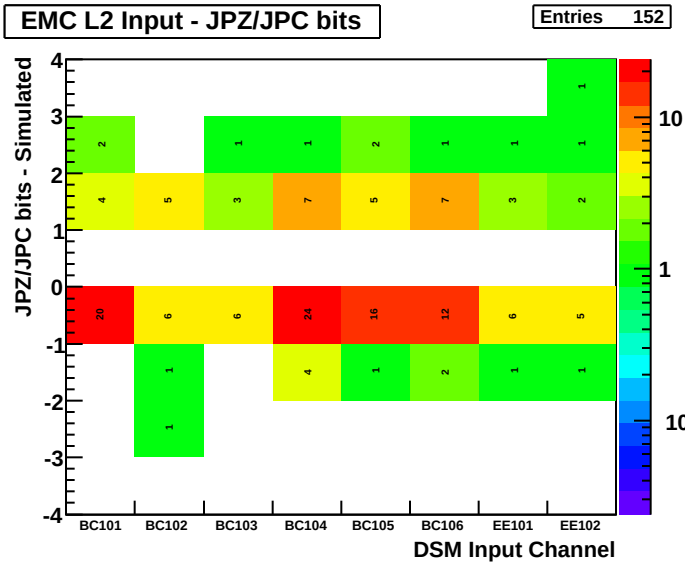

EMC L2 Input - JPX/JPA bits
Entries 1514712
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

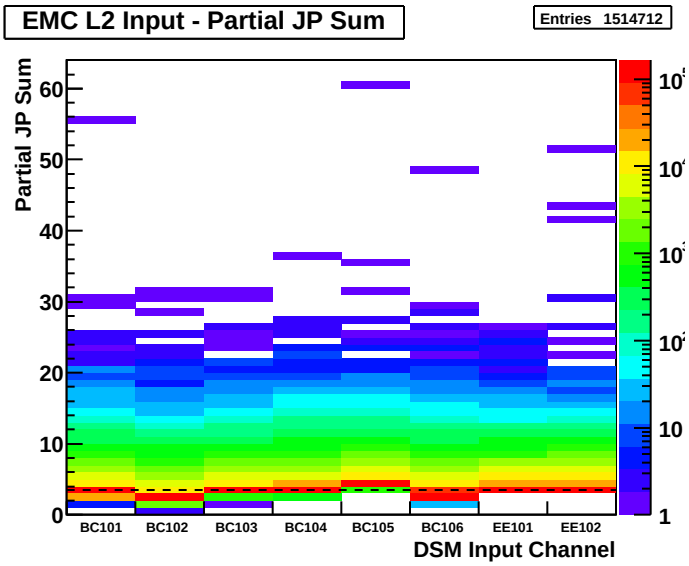

EMC L2 Input - JPX/JPA bits
Entries 139
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

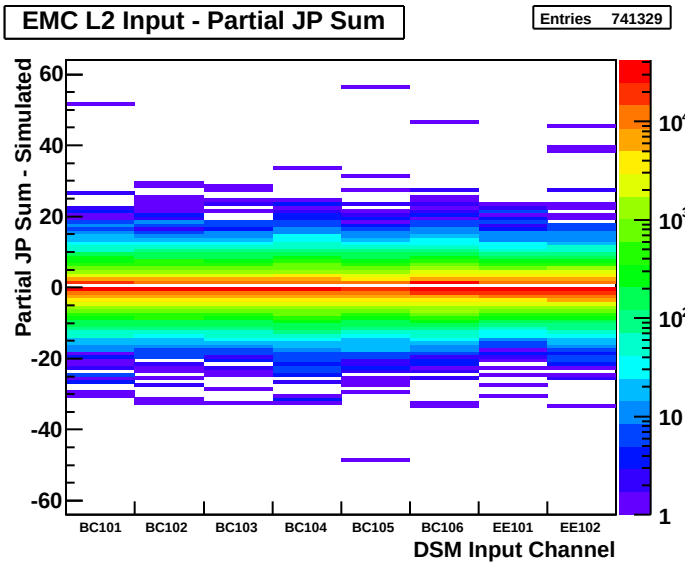

EMC L2 Input - JPY/JPB bits
Entries 1514712
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

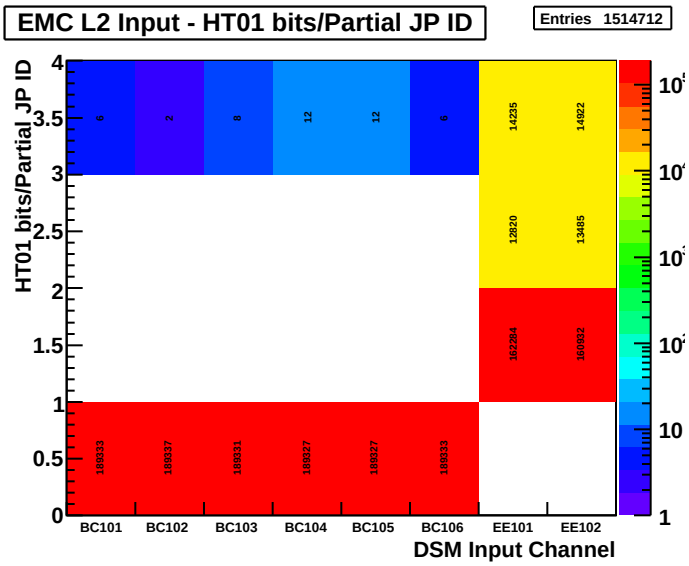

EMC L2 Input - JPY/JPB bits
Entries 128
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

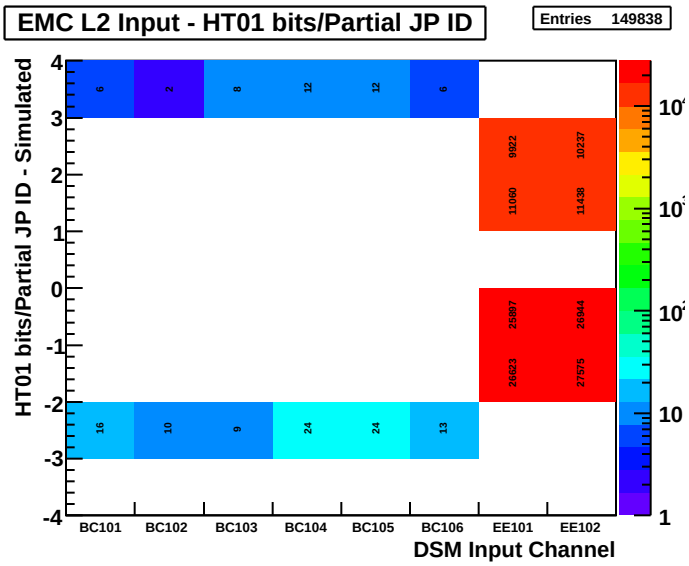

EMC L2 Input - JPZ/JPC bits
Entries 1514712
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

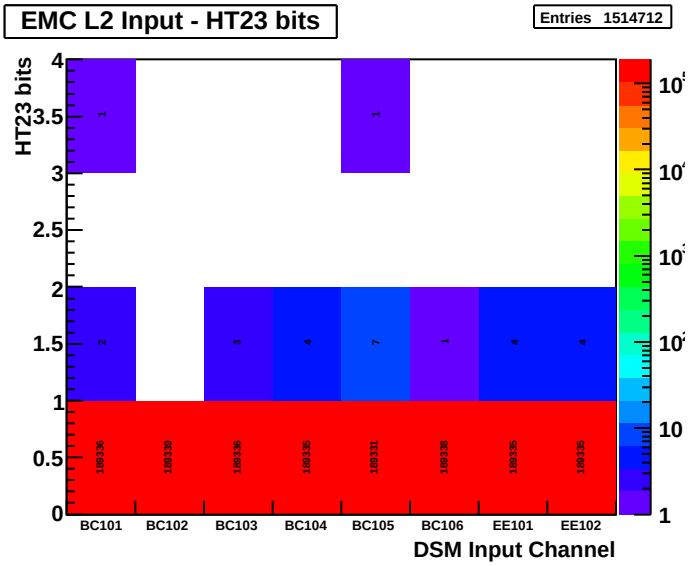

EMC L2 Input - JPZ/JPC bits
Entries 152
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

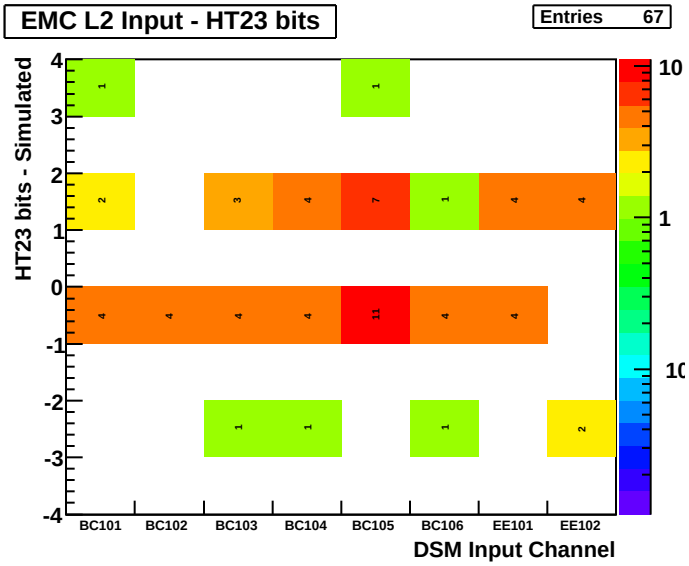

EMC L2 Input - Partial JP Sum
Entries 1514712
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

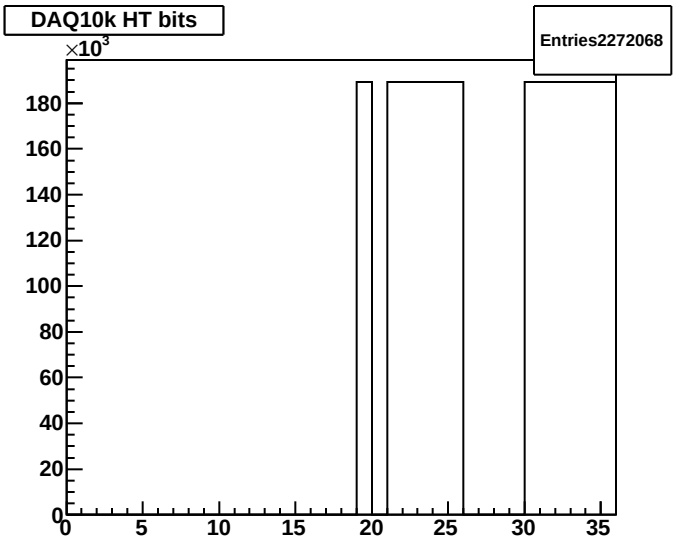

EMC L2 Input - Partial JP Sum
Entries 741329
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

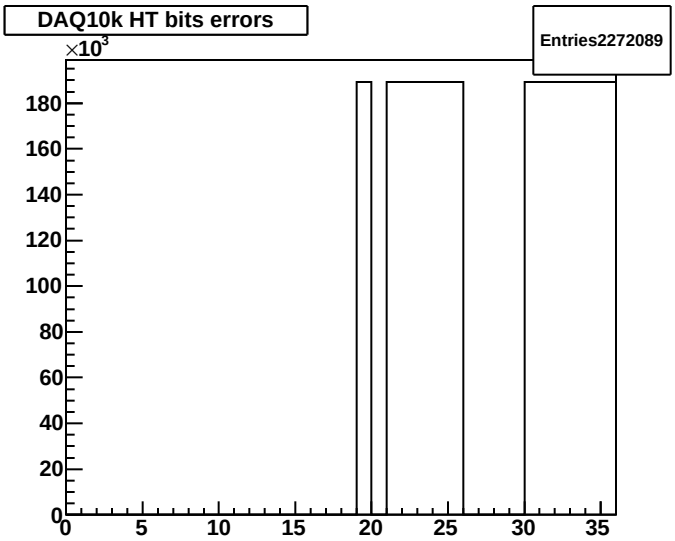

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1514712
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

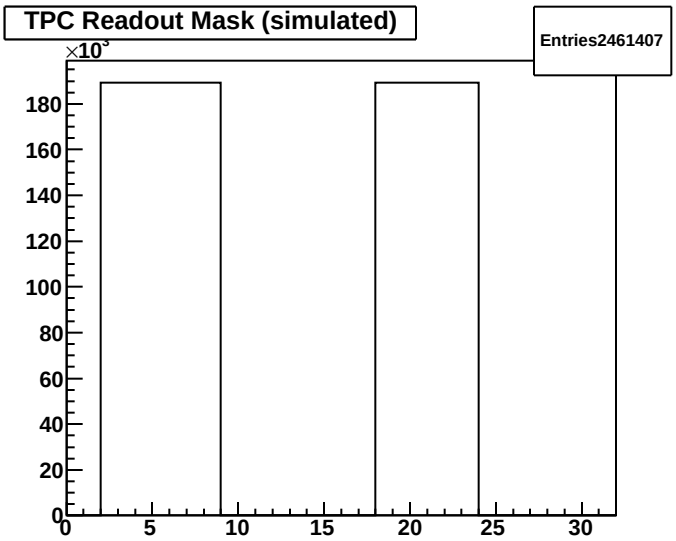

EMC L2 Input - HT01 bits/Partial JP ID
Entries 149838
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

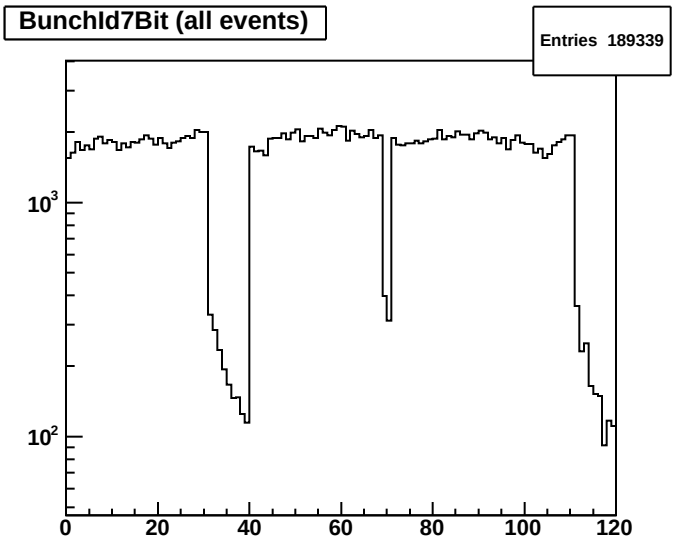

EMC L2 Input - HT23 bits
Entries 1514712
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

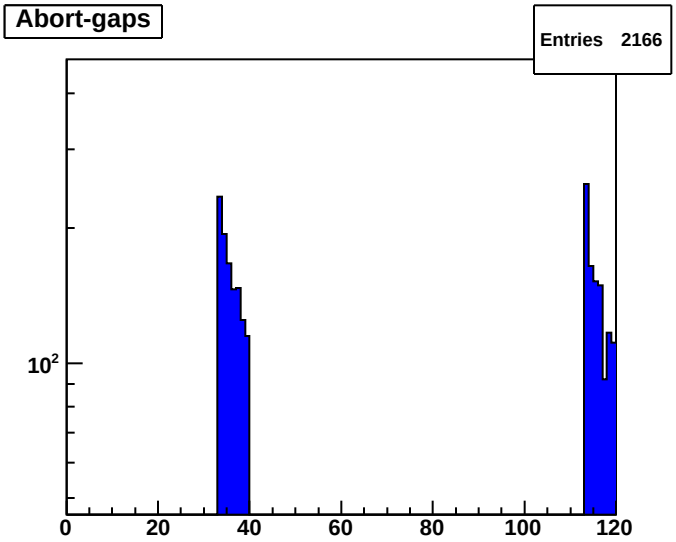

EMC L2 Input - HT23 bits
Entries 67
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

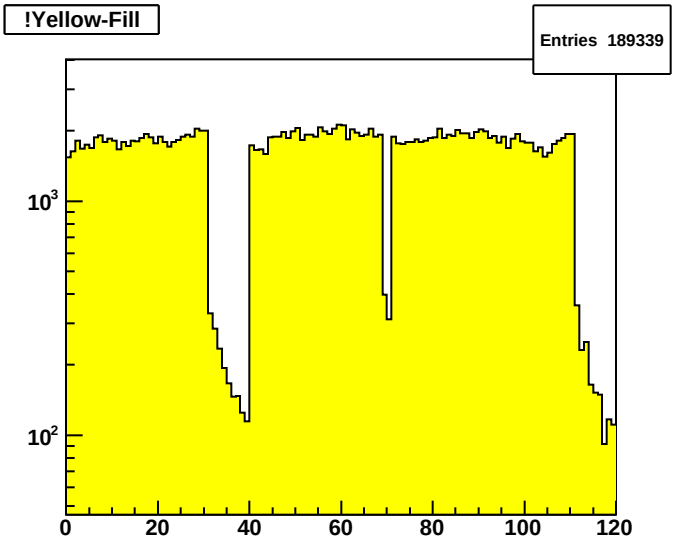

DAQ10k HT bits
Entries2272068
×10^3
180
160
140
120
100
80
60
40
20
0
0
5
10
15
20
25
30
35

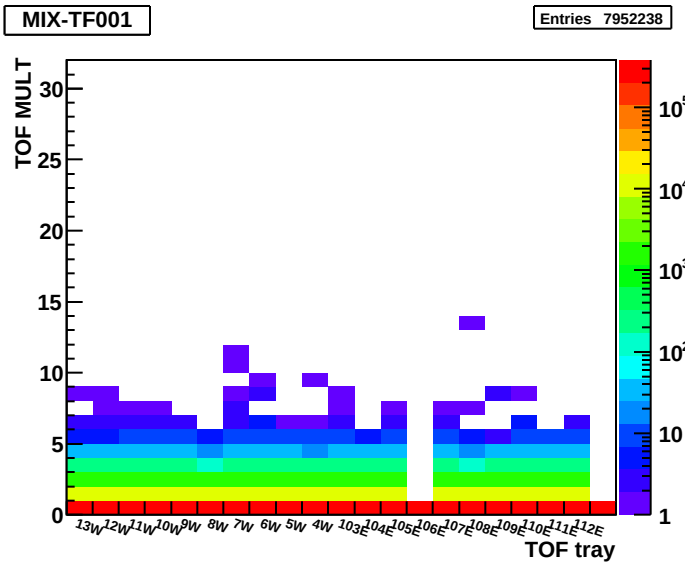

DAQ10k HT bits errors
Entries2272089
×10^3
180
160
140
120
100
80
60
40
20
0
0
5
10
15
20
25
30
35

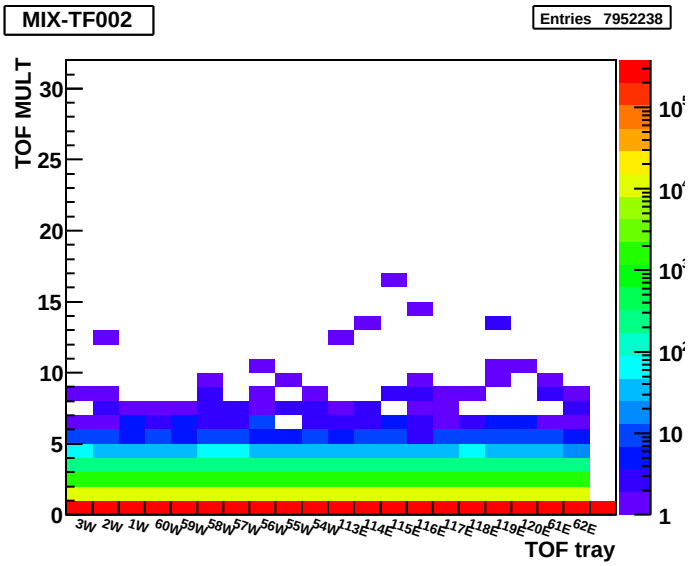

TPC Readout Mask (simulated)
Entries2461407
×10^3
180
160
140
120
100
80
60
40
20
0
0
5
10
15
20
25
30

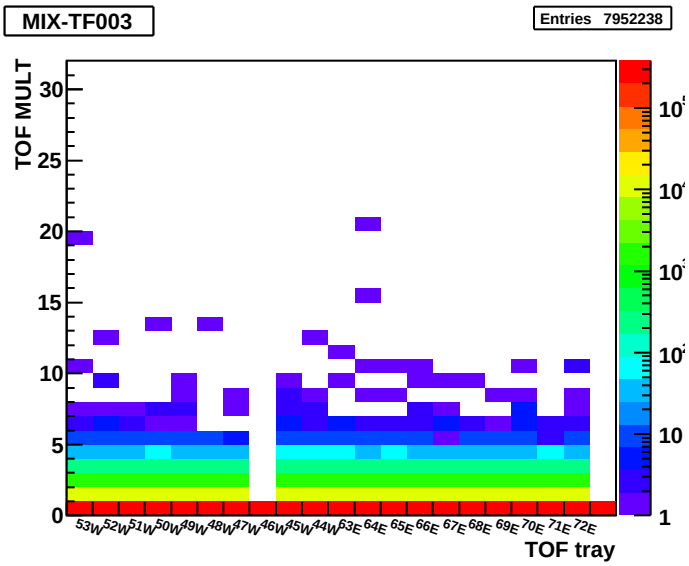

BunchId7Bit (all events)
Entries 189339
10^3
10^2
0
20
40
60
80
100
120

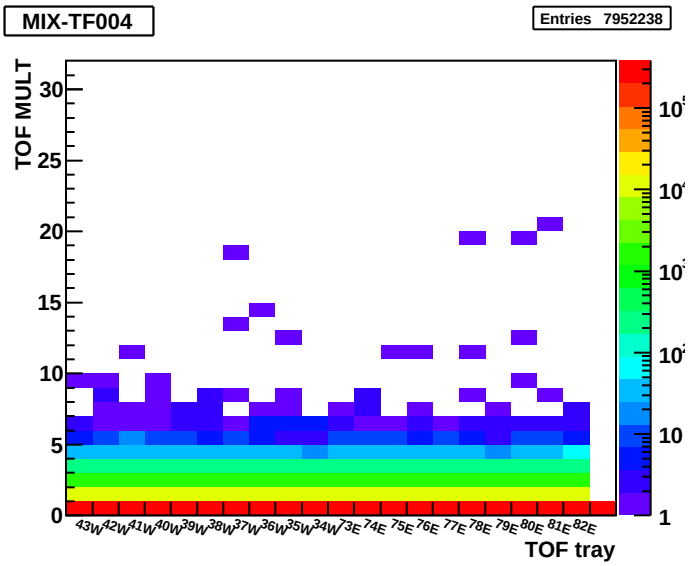

Abort-gaps
Entries 2166
10^2
0
20
40
60
80
100
120

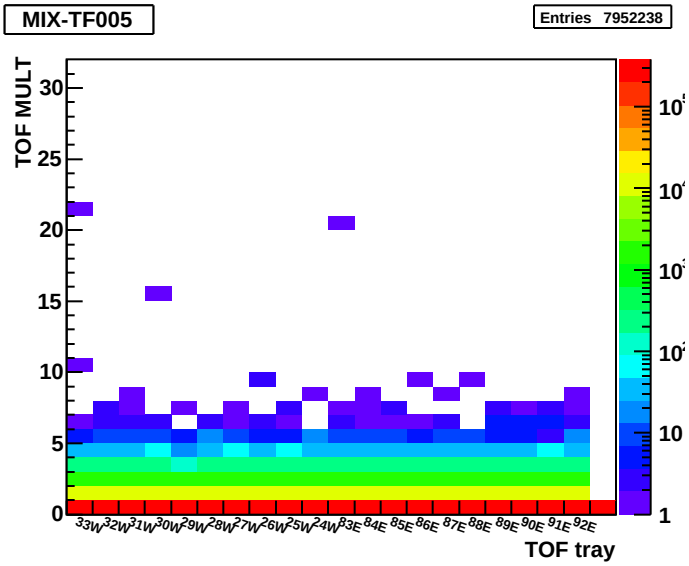

!Yellow-Fill
Entries 189339
10^3
10^2
0
20
40
60
80
100
120

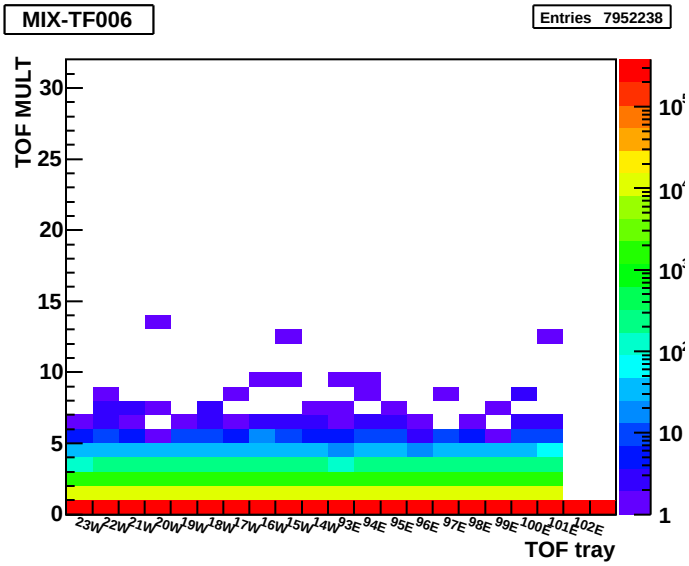

MIX-TF001
Entries 7952238
TOF MULT
TOF tray

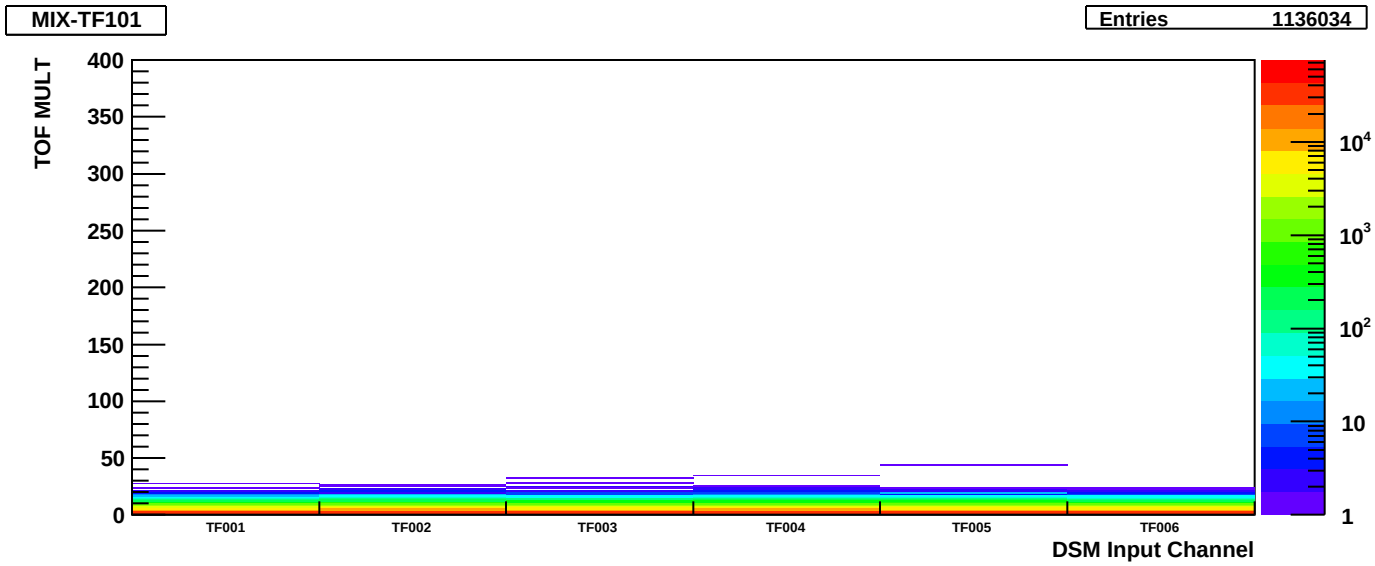

MIX-TF002
Entries 7952238
TOF MULT
TOF tray

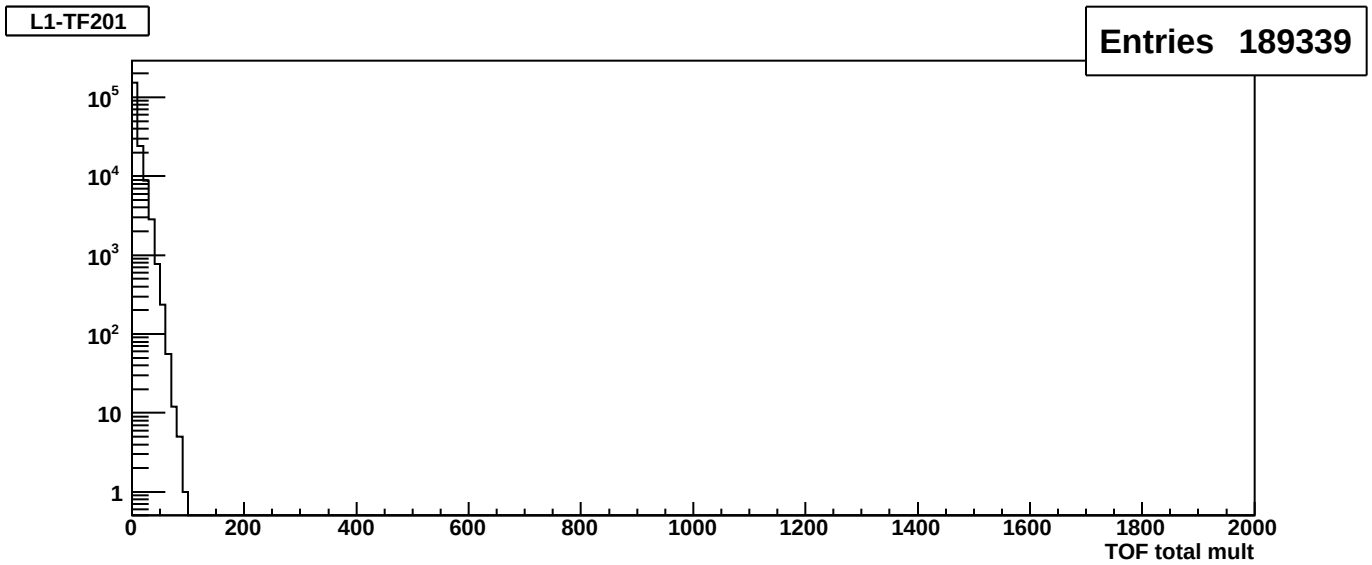

MIX-TF003
Entries 7952238
TOF MULT
TOF tray

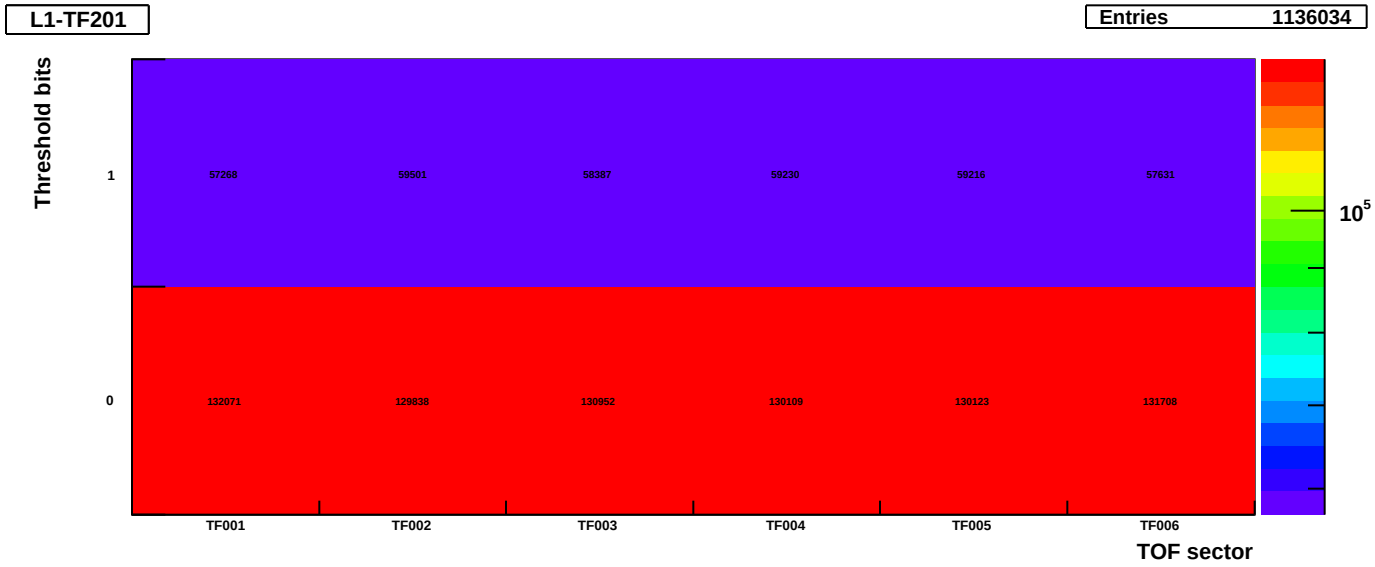

MIX-TF004
Entries 7952238
TOF MULT
TOF tray

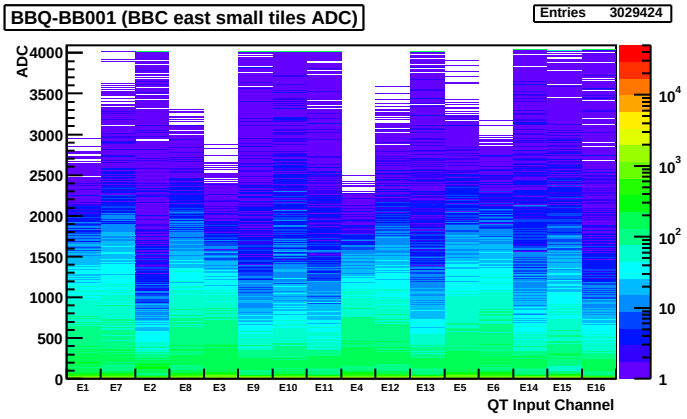

MIX-TF005
Entries 7952238
TOF MULT
TOF tray

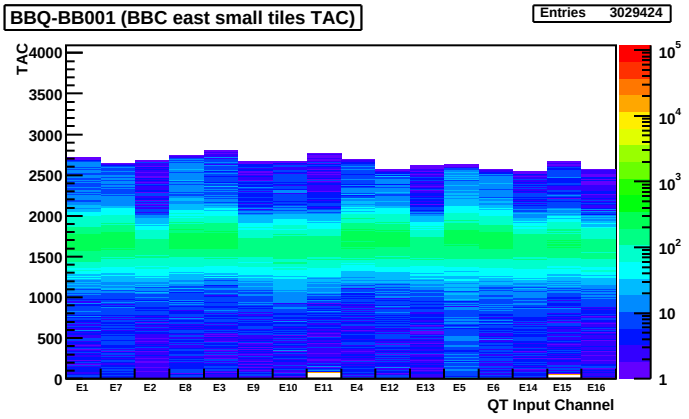

MIX-TF006
Entries 7952238
TOF MULT
TOF tray

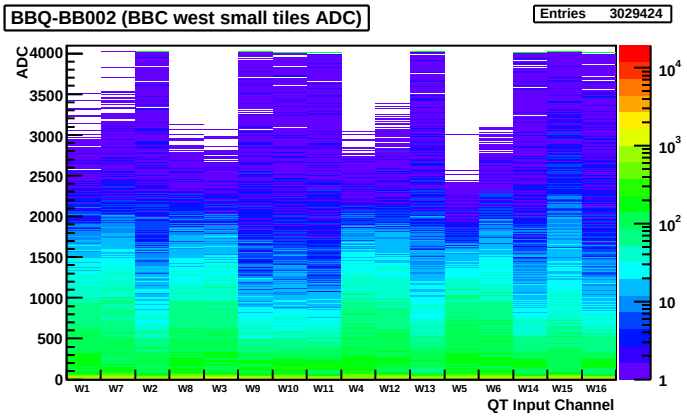

MIX-TF101
Entries 1136034
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

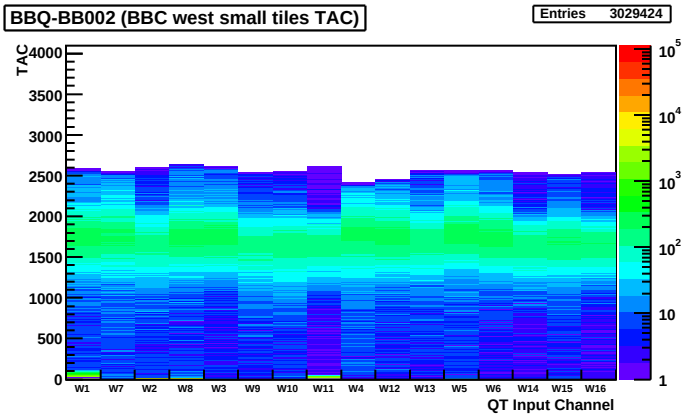

L1-TF201
Entries 189339
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

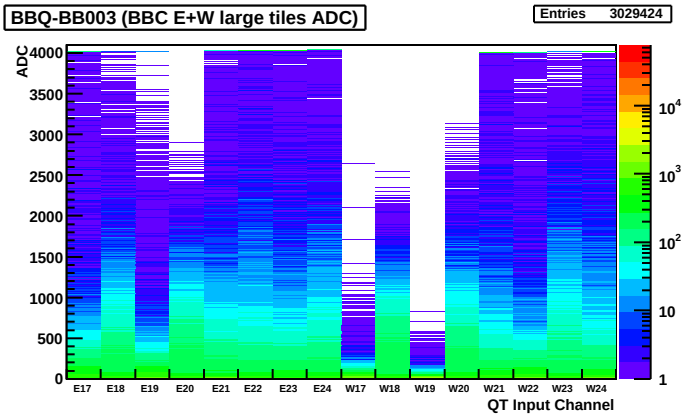

L1-TF201
Entries 1136034
Threshold bits
1
0
57268
59501
58387
59230
59216
57631
132071
129838
130952
130109
130123
131708
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5

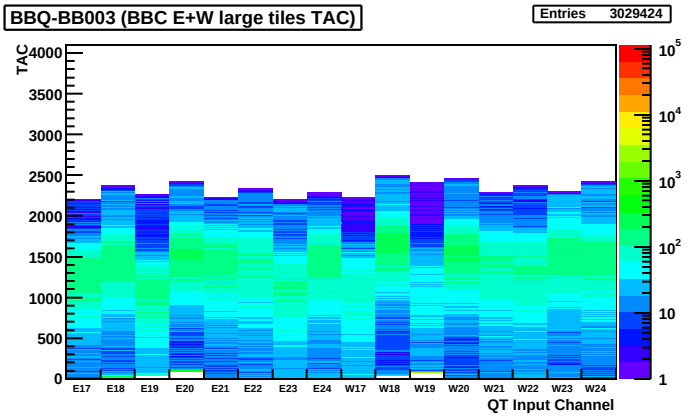

BBQ-BB001 (BBC east small tiles ADC)
Entries 3029424
ADC
QT Input Channel

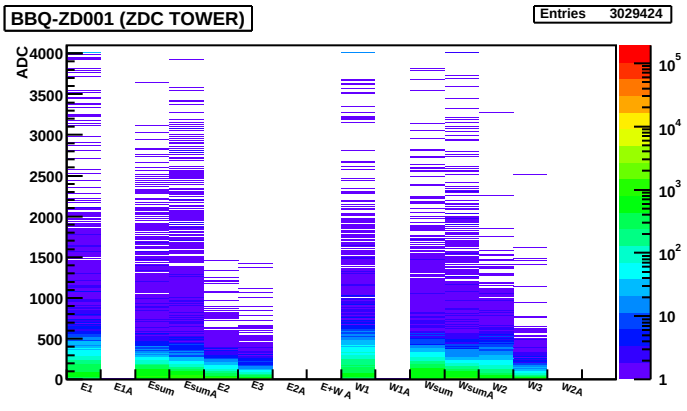

BBQ-BB001 (BBC east small tiles TAC)
Entries 3029424
TAC
QT Input Channel

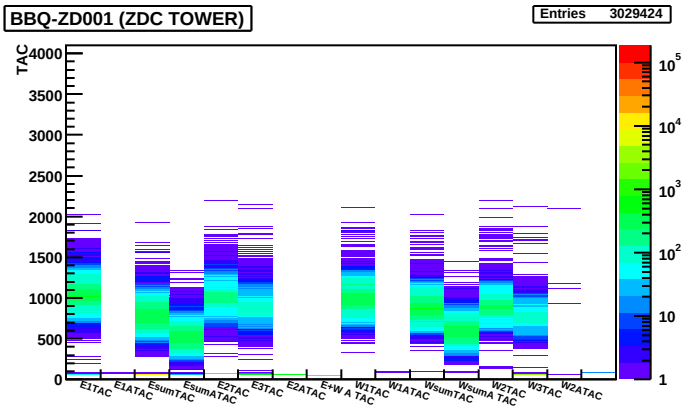

BBQ-BB002 (BBC west small tiles ADC)
Entries 3029424
ADC
QT Input Channel

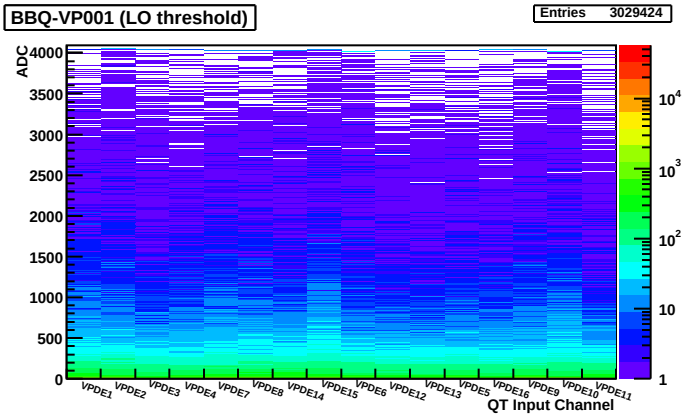

BBQ-BB002 (BBC west small tiles TAC)
Entries 3029424
TAC
QT Input Channel

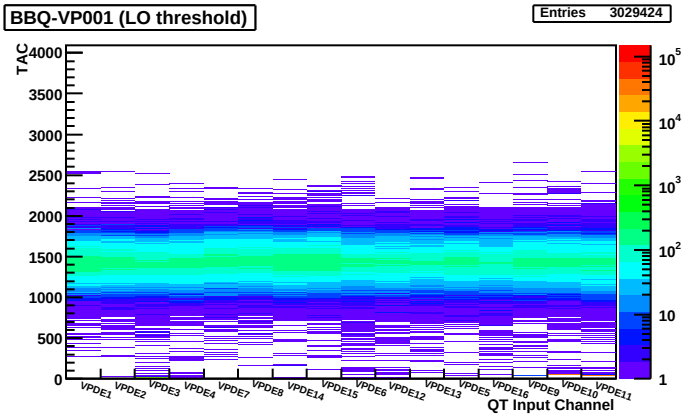

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 3029424
ADC
QT Input Channel

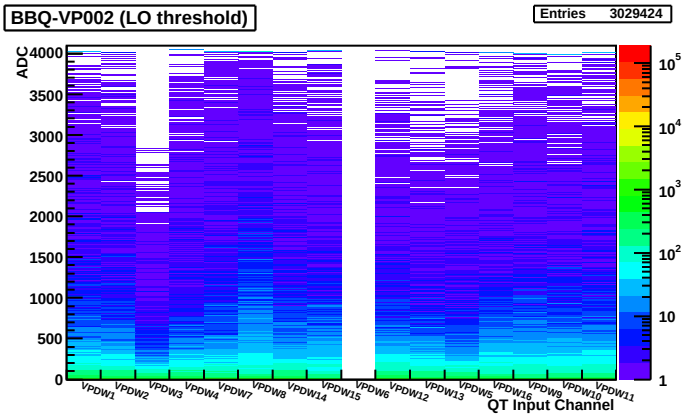

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 3029424
TAC
QT Input Channel

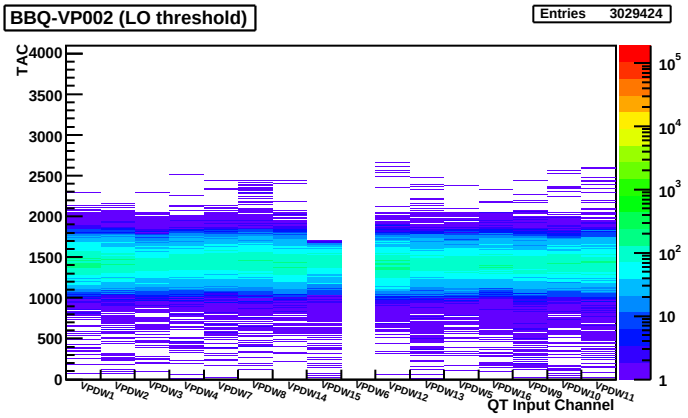

BBQ-ZD001 (ZDC TOWER)
Entries 3029424
ADC

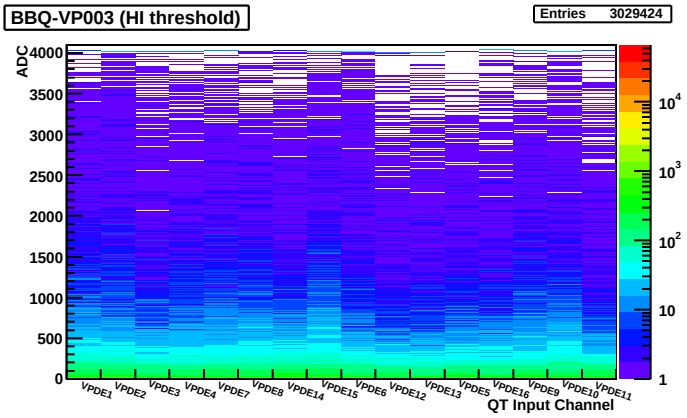

BBQ-ZD001 (ZDC TOWER)
Entries 3029424
TAC

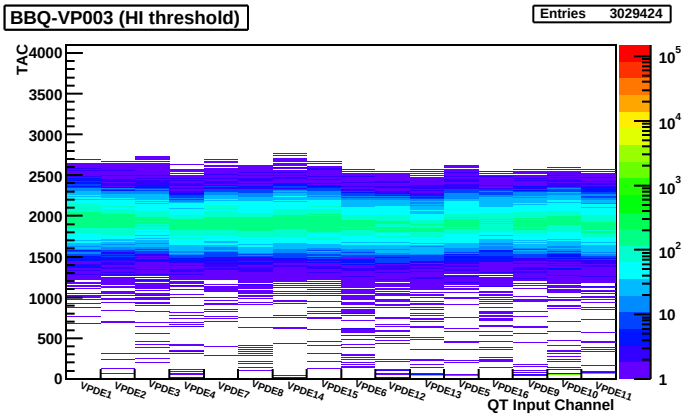

BBQ-VP001 (LO threshold)
Entries 3029424
ADC
QT Input Channel

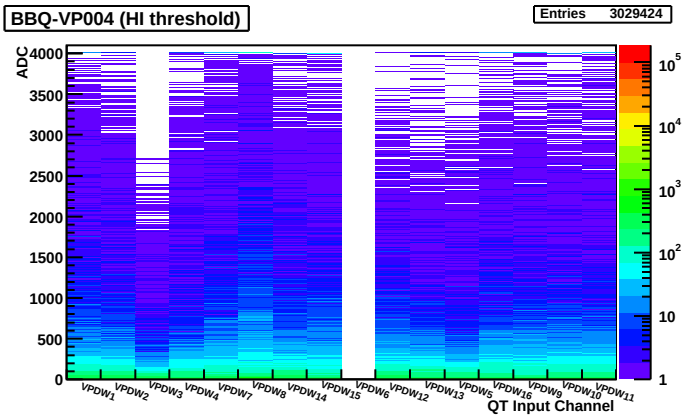

BBQ-VP001 (LO threshold)
Entries 3029424
TAC
QT Input Channel

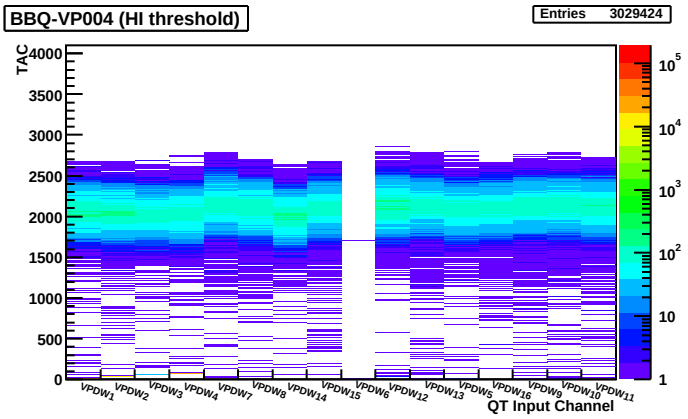

BBQ-VP002 (LO threshold)
Entries 3029424
ADC
QT Input Channel

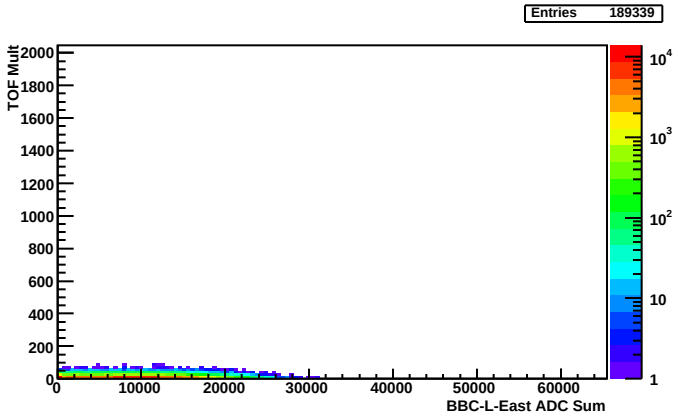

BBQ-VP002 (LO threshold)
Entries 3029424
TAC
QT Input Channel

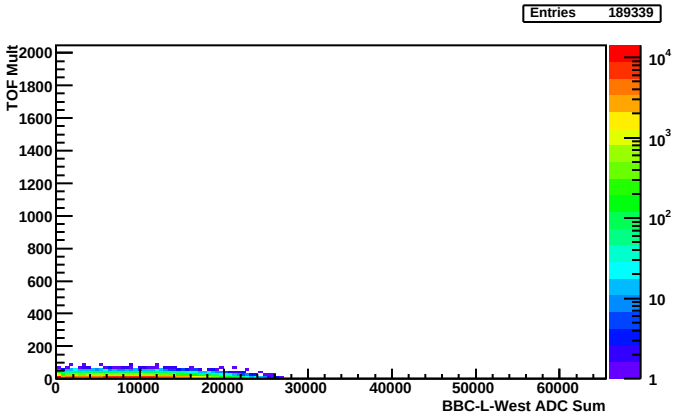

BBQ-VP003 (HI threshold)
Entries 3029424
ADC
QT Input Channel

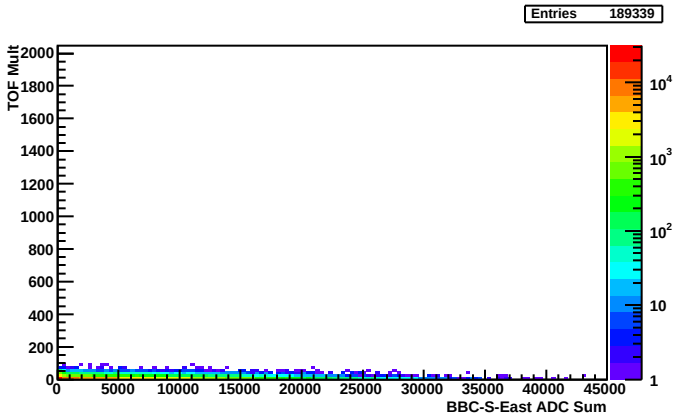

BBQ-VP003 (HI threshold)
Entries 3029424
TAC
QT Input Channel

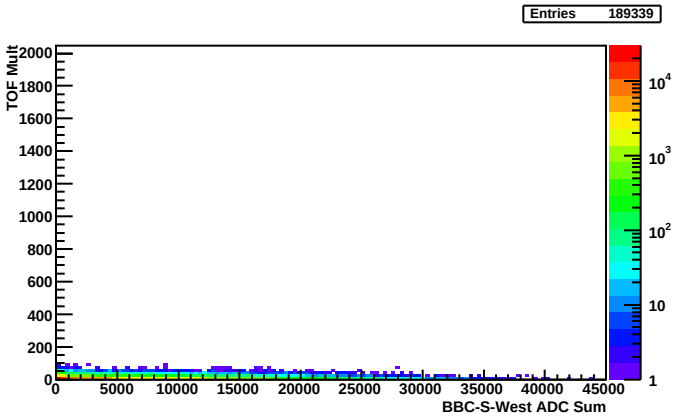

BBQ-VP004 (HI threshold)
Entries 3029424
ADC
QT Input Channel

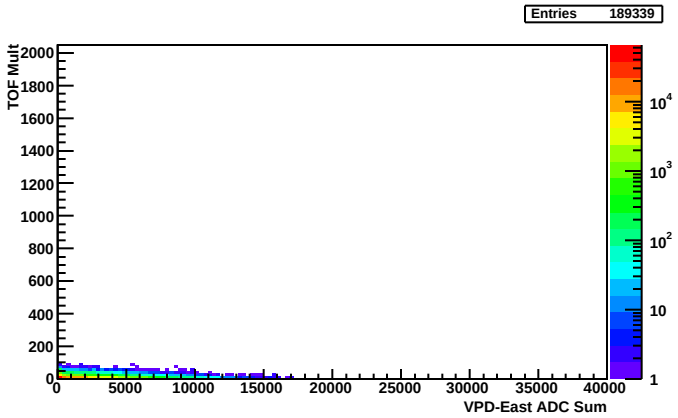

BBQ-VP004 (HI threshold)
Entries 3029424
TAC
QT Input Channel

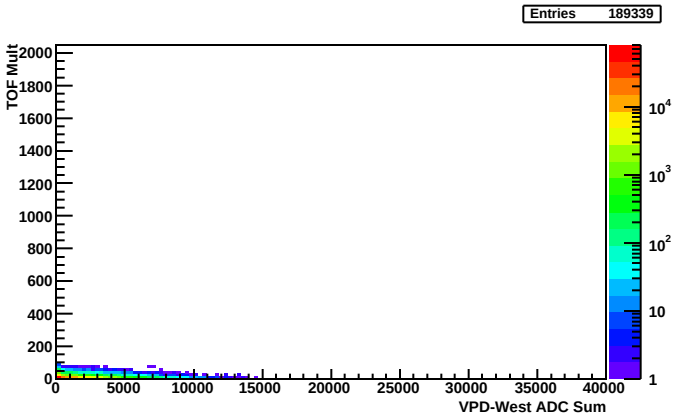

Entries 189339
TOF Mult
BBC-L-East ADC Sum

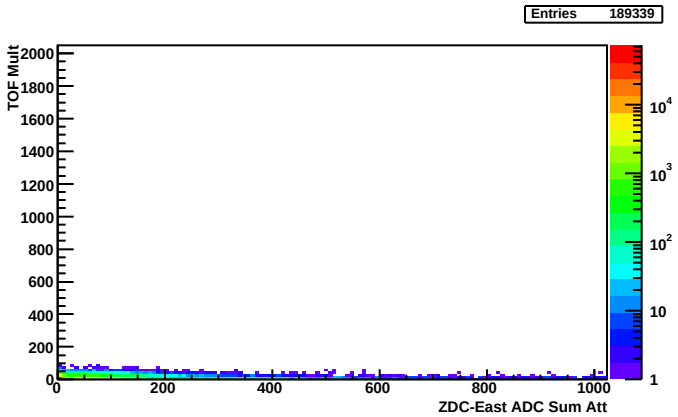

Entries 189339
TOF Mult
BBC-L-West ADC Sum

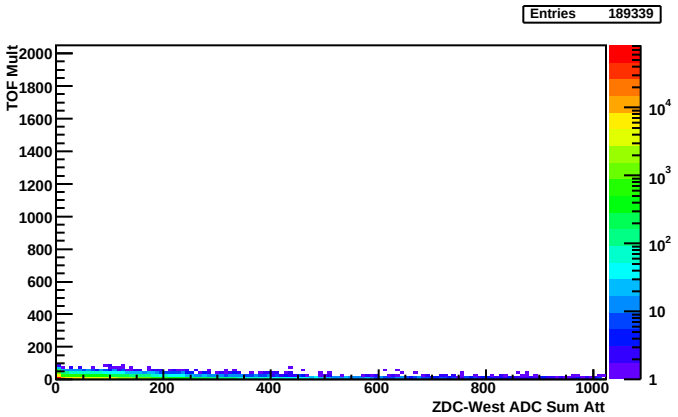

Entries 189339
TOF Mult
BBC-S-East ADC Sum

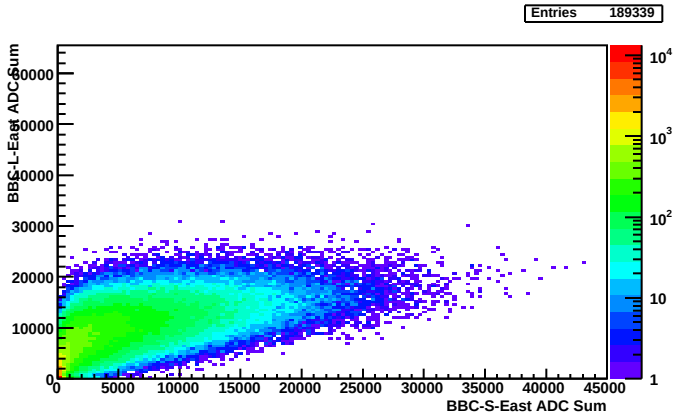

Entries 189339
TOF Mult
BBC-S-West ADC Sum

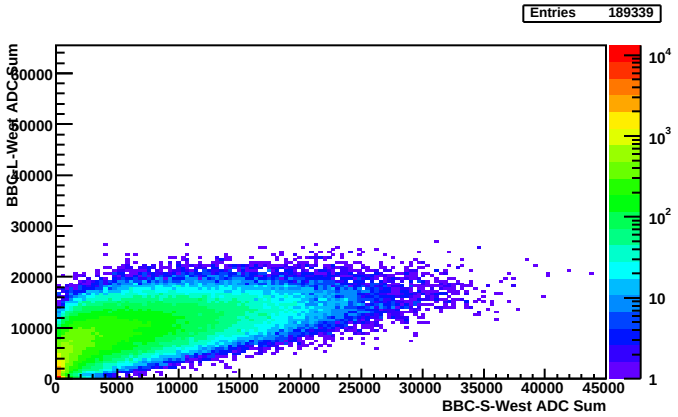

Entries 189339
TOF Mult
VPD-East ADC Sum

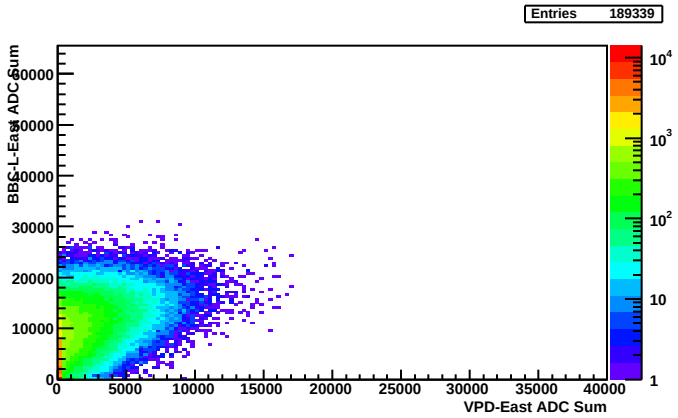

Entries 189339
TOF Mult
VPD-West ADC Sum

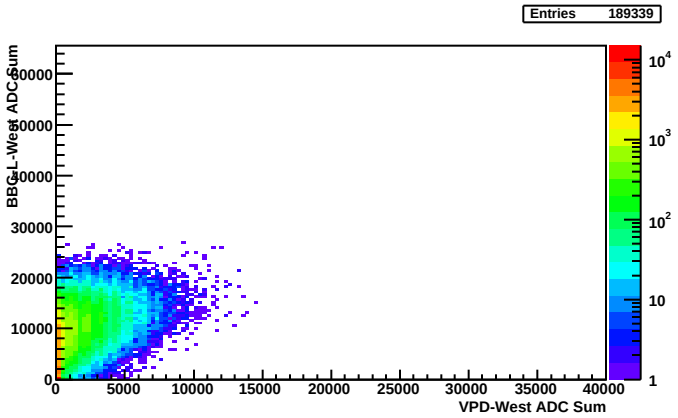

Entries 189339
TOF Mult
ZDC-East ADC Sum Att

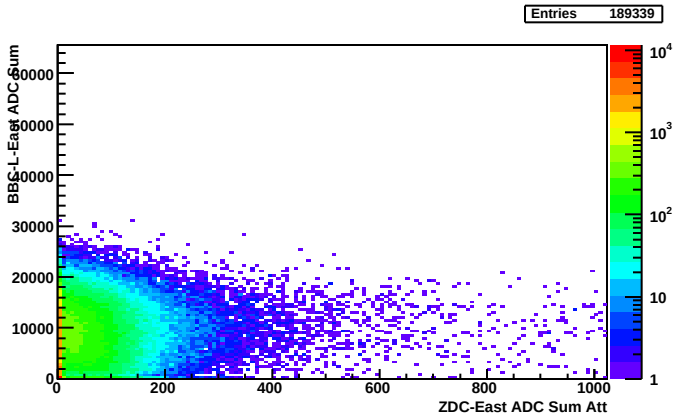

Entries 189339
TOF Mult
ZDC-West ADC Sum Att

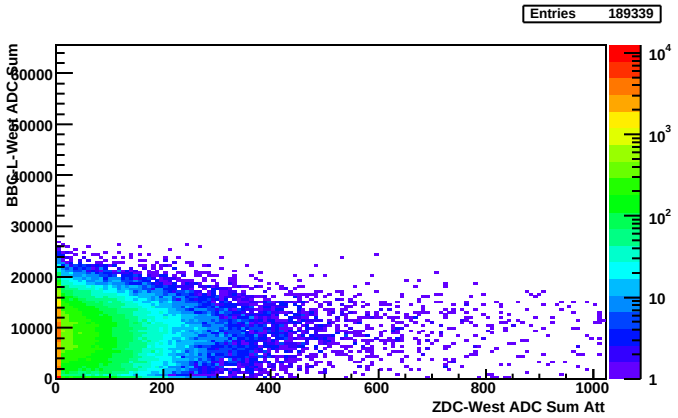

Entries 189339
BBC-L-East ADC Sum
BBC-S-East ADC Sum

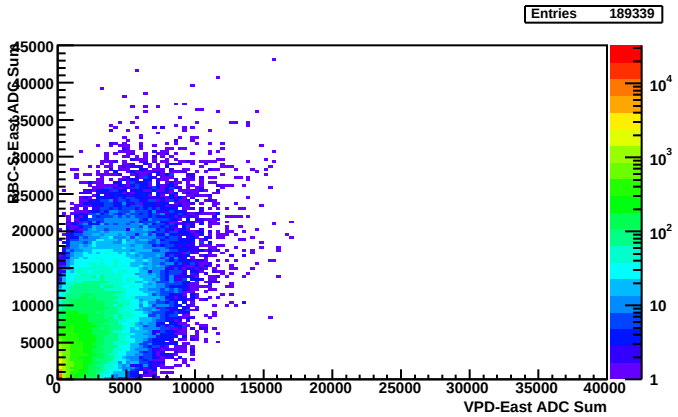

Entries 189339
BBC-L-West ADC Sum
BBC-S-West ADC Sum

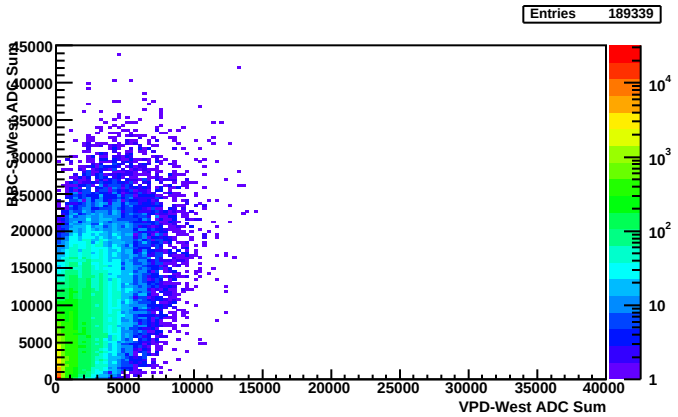

Entries 189339
BBC-L-East ADC Sum
VPD-East ADC Sum

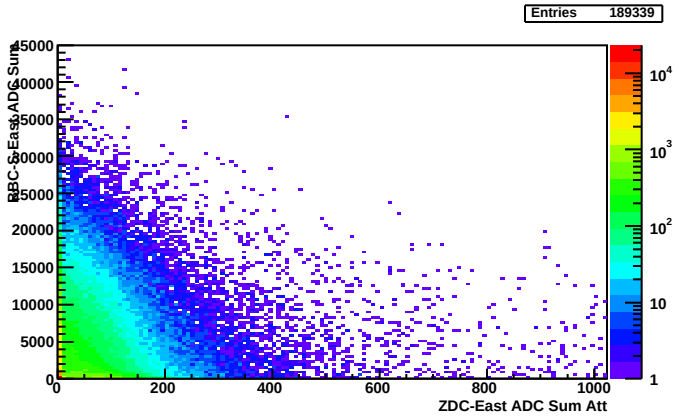

Entries 189339
BBC-L-West ADC Sum
VPD-West ADC Sum

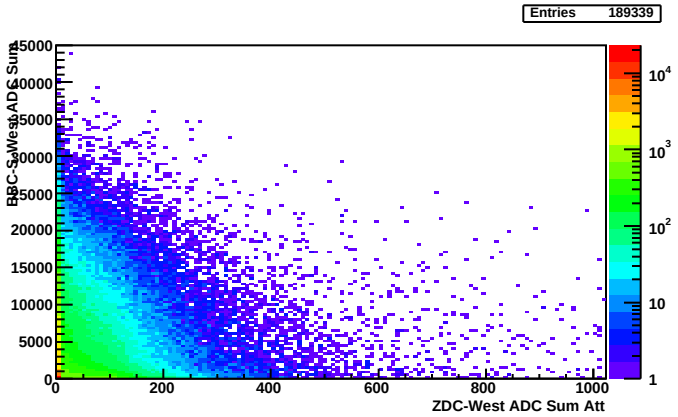

Entries 189339
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

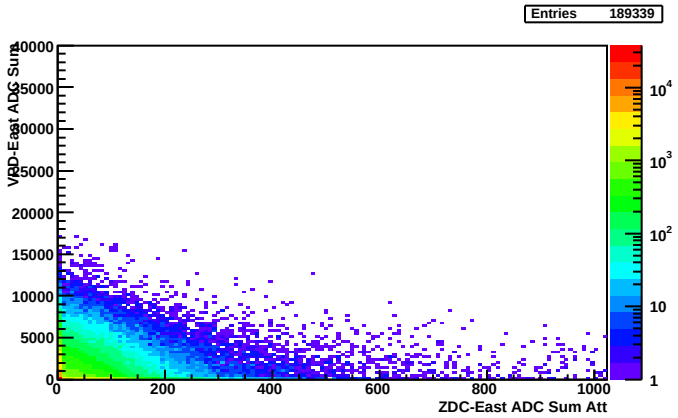

Entries 189339
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

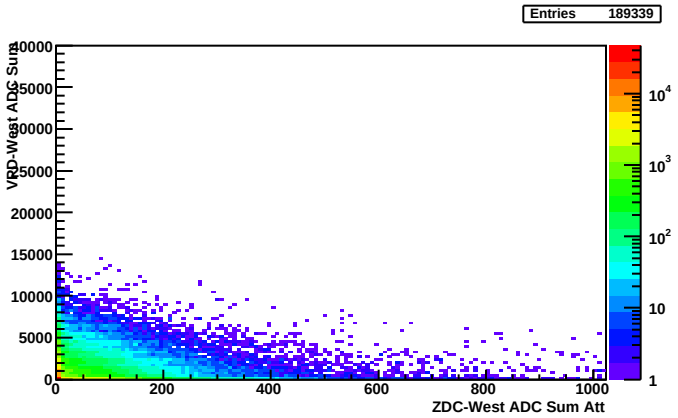

Entries 189339
BBC-S-East ADC Sum
VPD-East ADC Sum

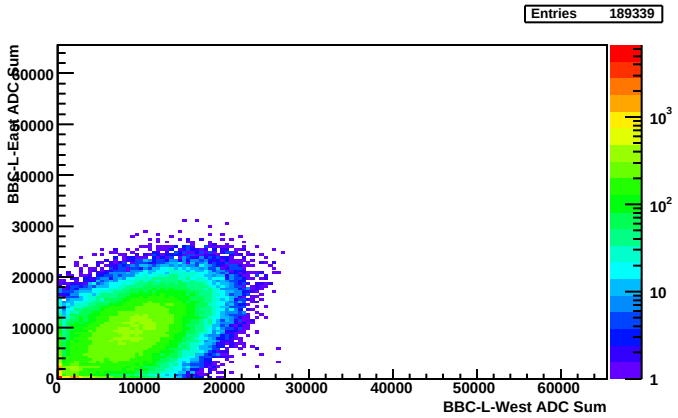

Entries 189339
BBC-S-West ADC Sum
VPD-West ADC Sum

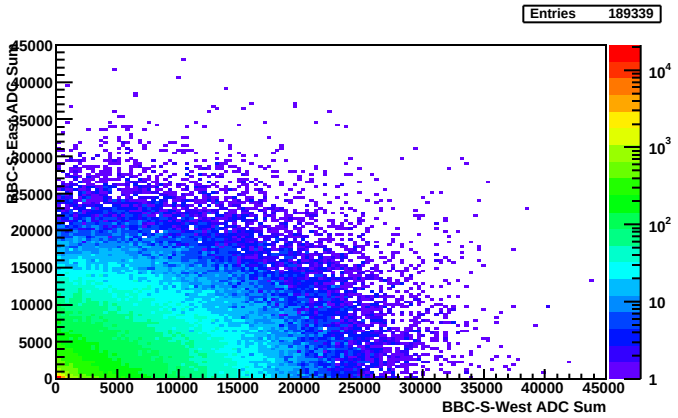

Entries 189339
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

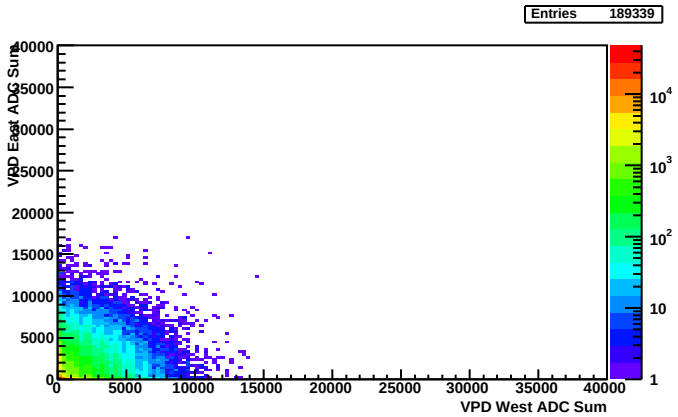

Entries 189339
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

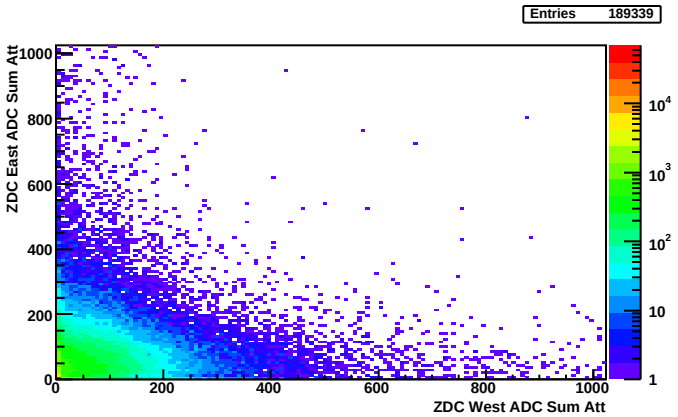

Entries 189339
VPD-East ADC Sum
ZDC-East ADC Sum Att

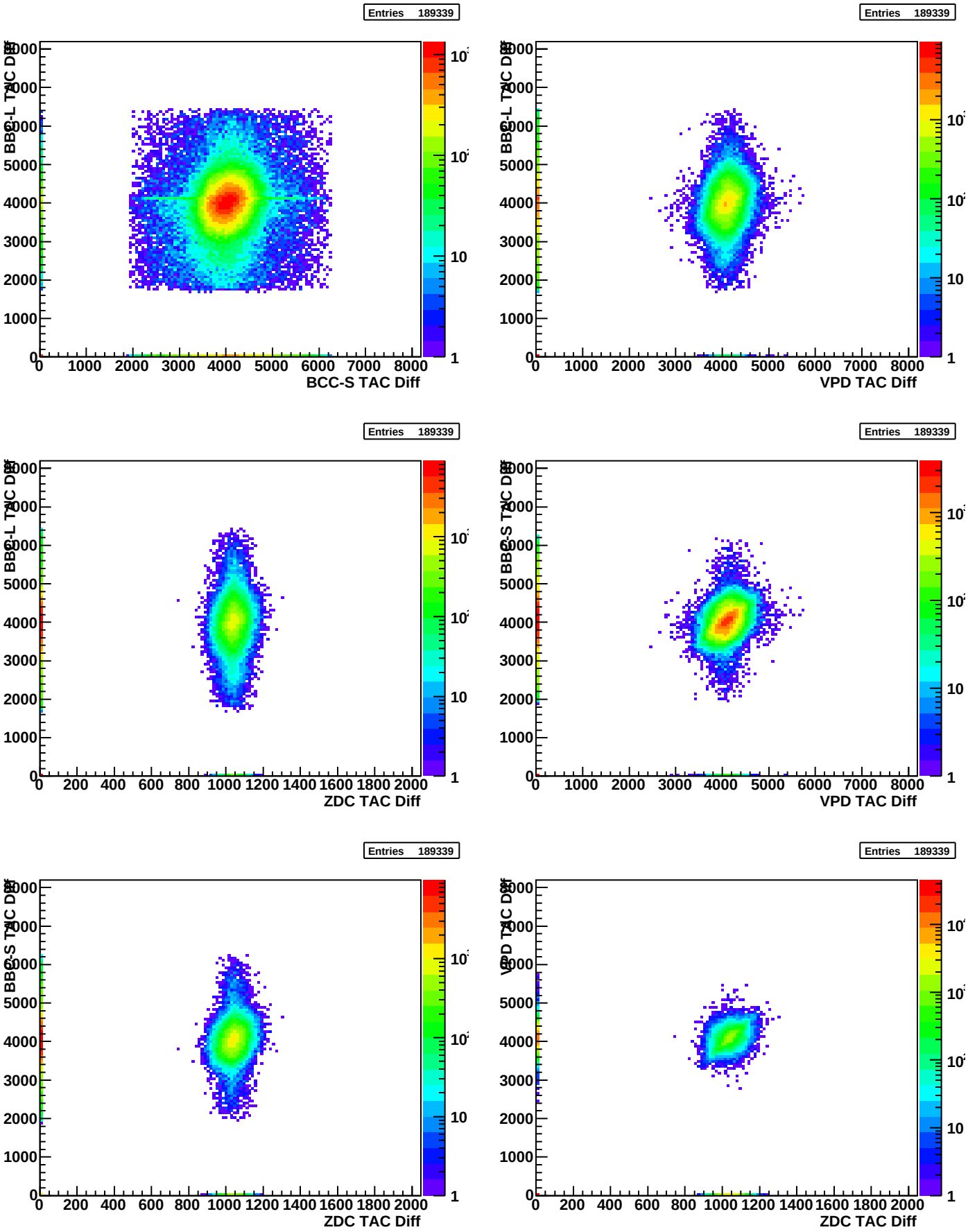

Entries 189339
VPD-West ADC Sum
ZDC-West ADC Sum Att

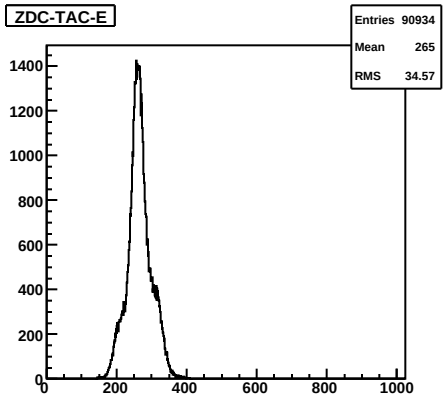

Entries 189339
BBC-L-East ADC Sum
BBC-L-West ADC Sum

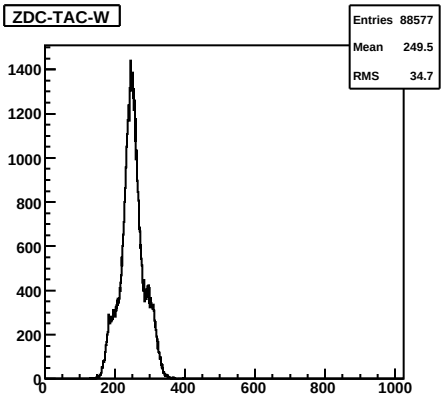

Entries 189339
BBC-S-East ADC Sum
BBC-S-West ADC Sum

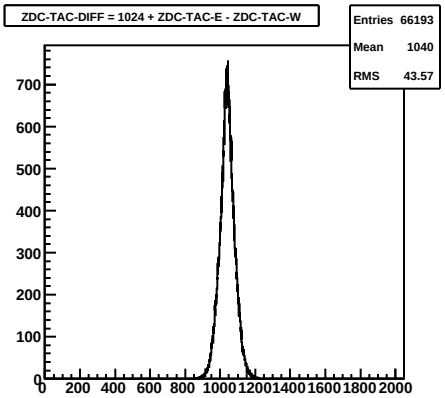

Entries 189339
VPD East ADC Sum
VPD West ADC Sum

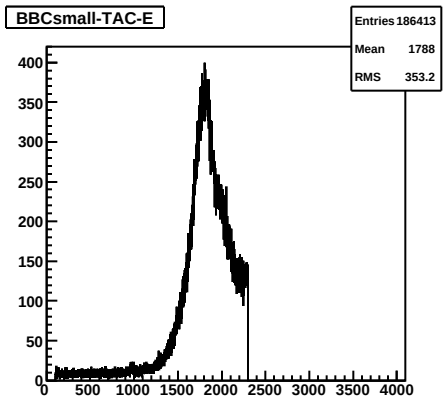

Entries 189339
ZDC East ADC Sum Att
ZDC West ADC Sum Att

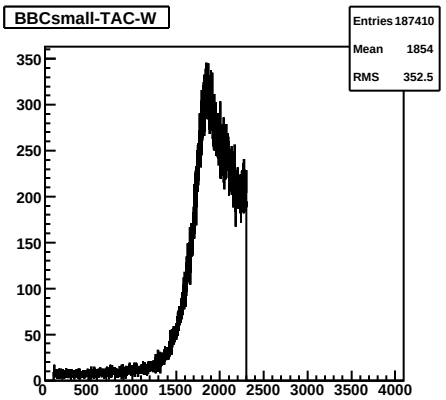

Entries 189339
BBC-L TAC Diff
BCC-S TAC Diff
Entries 189339
BBC-L TAC Diff
VPD TAC Diff
Entries 189339
BBC-L TAC Diff
ZDC TAC Diff
Entries 189339
BBC-S TAC Diff
VPD TAC Diff
Entries 189339
BBC-S TAC Diff
ZDC TAC Diff
Entries 189339
VPD TAC Diff
ZDC TAC Diff

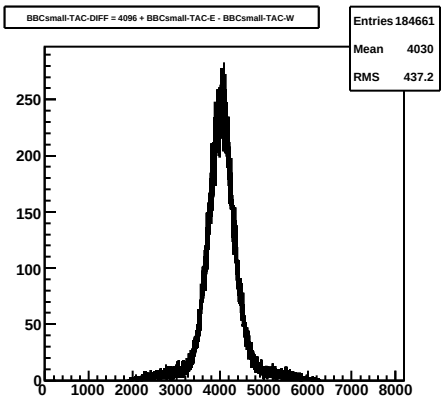

ZDC-TAC-E
Entries 90934
Mean 265
RMS 34.57

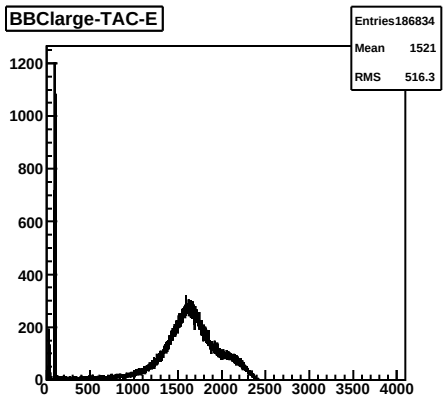

ZDC-TAC-W
Entries 88577
Mean 249.5
RMS 34.7

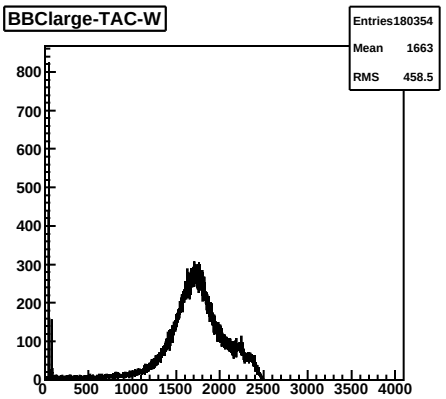

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 66193
Mean 1040
RMS 43.57

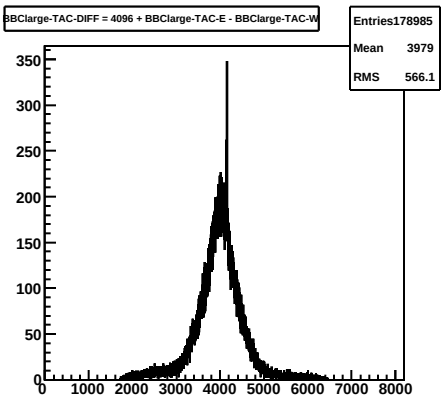

BBCsmall-TAC-E
Entries 186413
Mean 1788
RMS 353.2

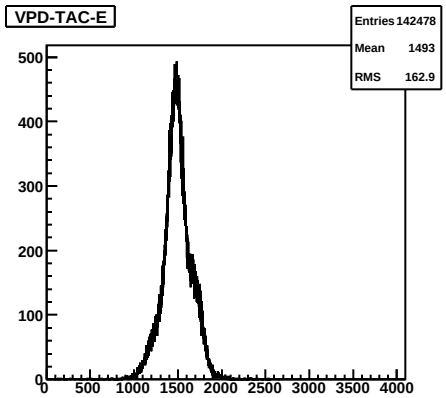

BBCsmall-TAC-W
Entries 187410
Mean 1854
RMS 352.5

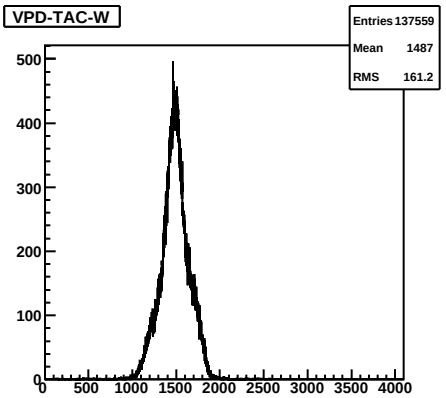

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 184661
Mean 4030
RMS 437.2

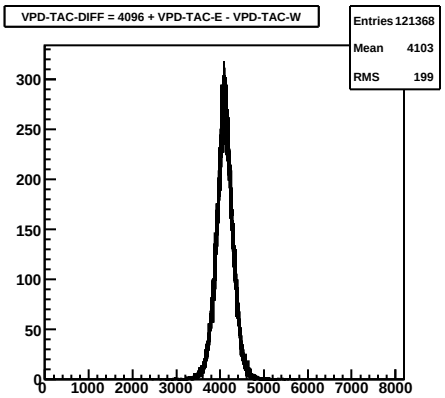

BBClarge-TAC-E
Entries 186834
Mean 1521
RMS 516.3

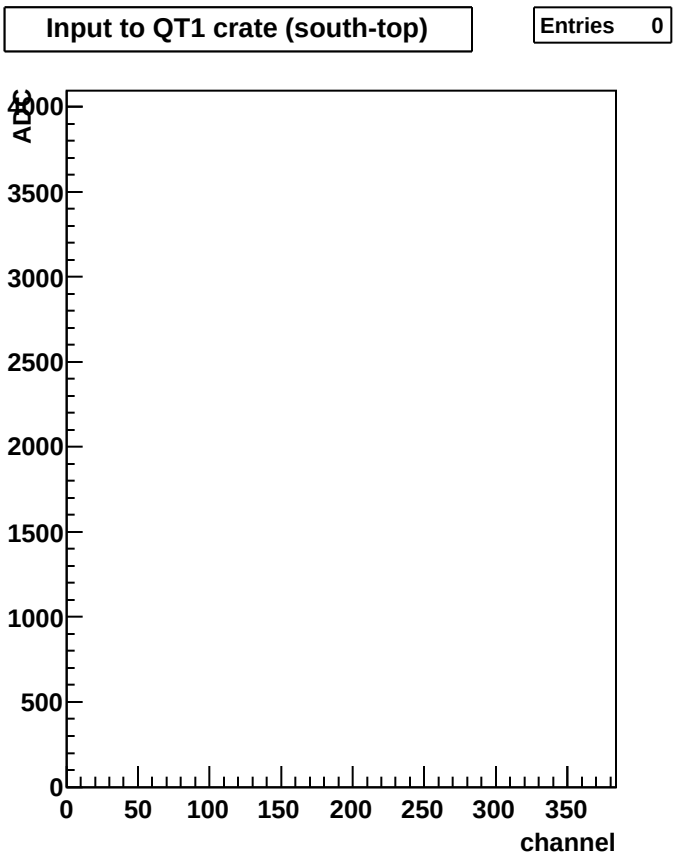

BBClarge-TAC-W
Entries 180354
Mean 1663
RMS 458.5

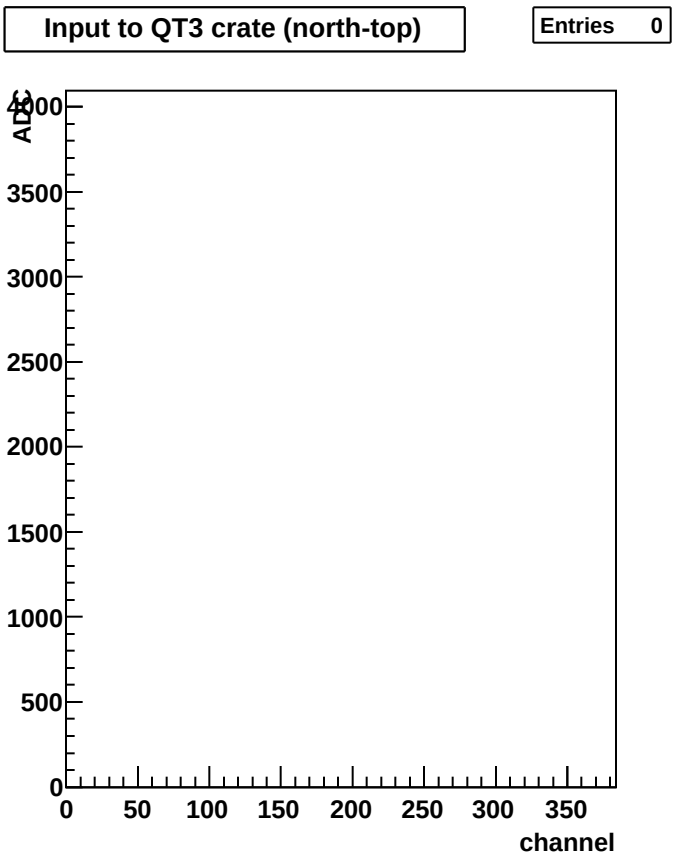

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 178985
Mean 3979
RMS 566.1

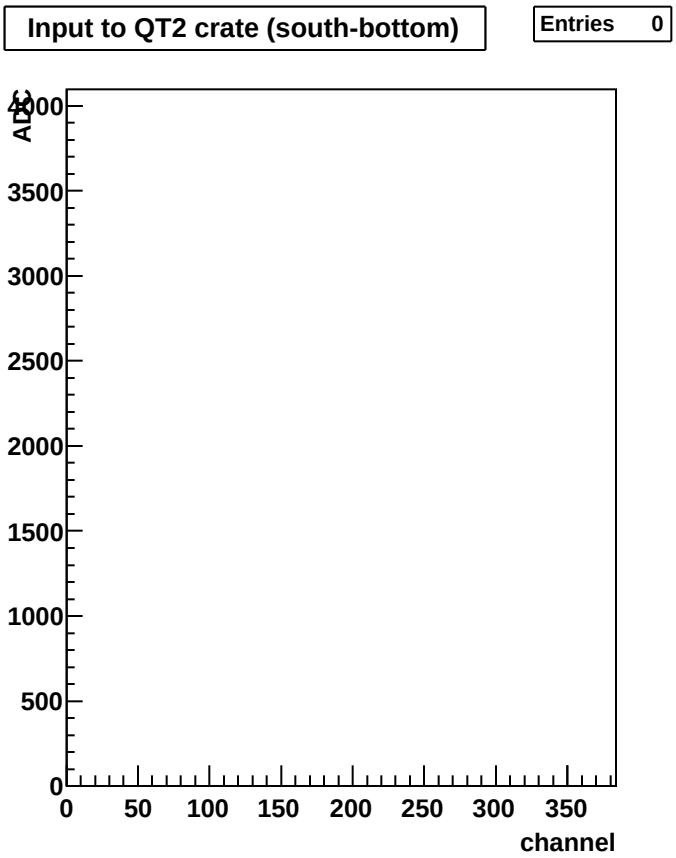

VPD-TAC-E
Entries 142478
Mean 1493
RMS 162.9

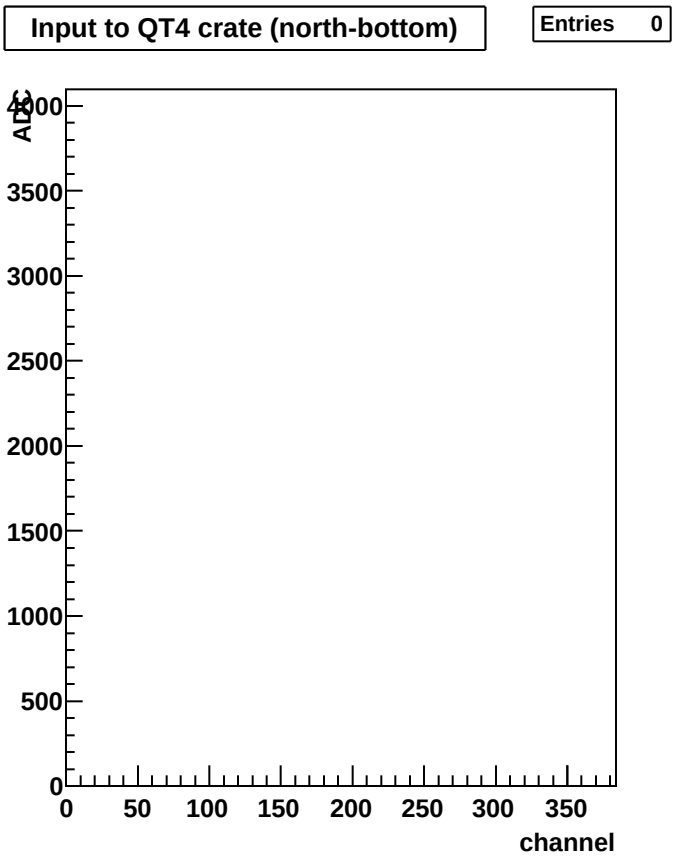

VPD-TAC-W
Entries 137559
Mean 1487
RMS 161.2

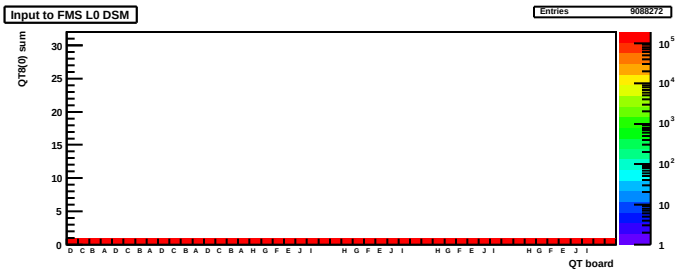

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 121368
Mean 4103
RMS 199

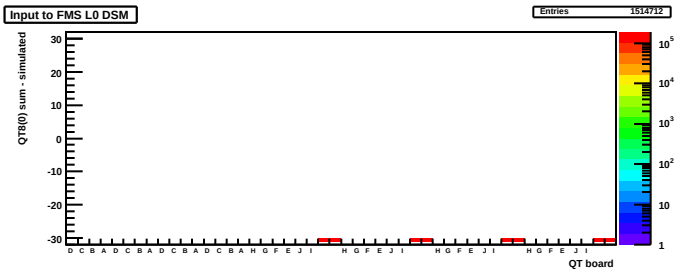

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

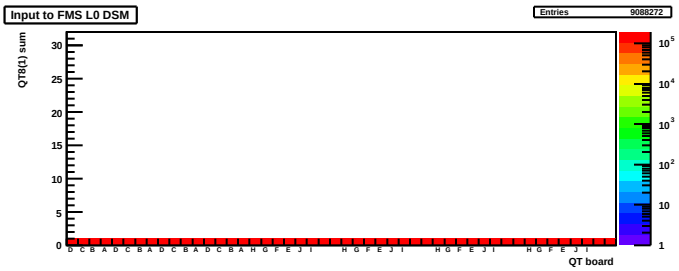

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

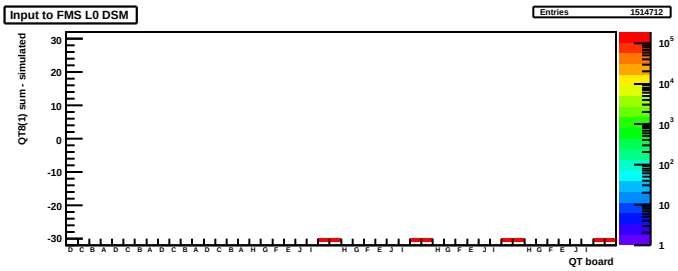

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

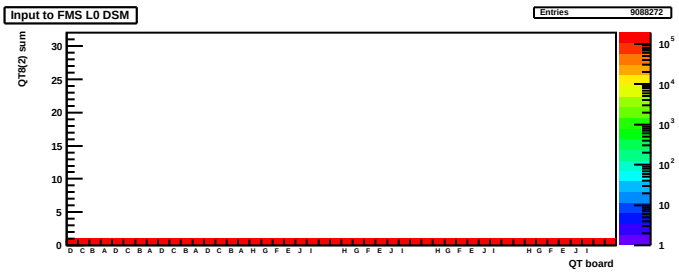

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

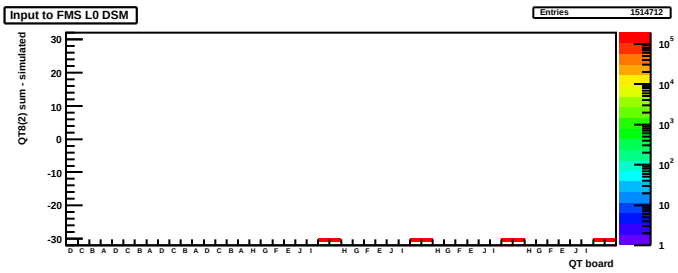

Input to FMS L0 DSM
Entries 9088272
QT8(0) sum
QT board

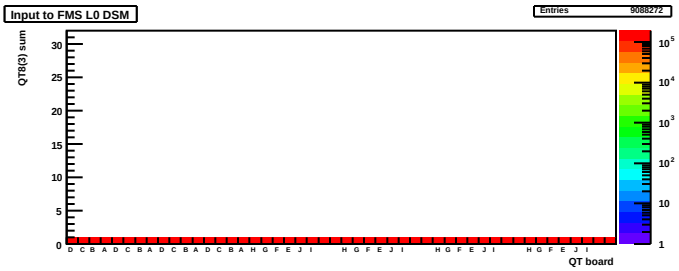

Input to FMS L0 DSM
Entries 1514712
QT8(0) sum - simulated
QT board

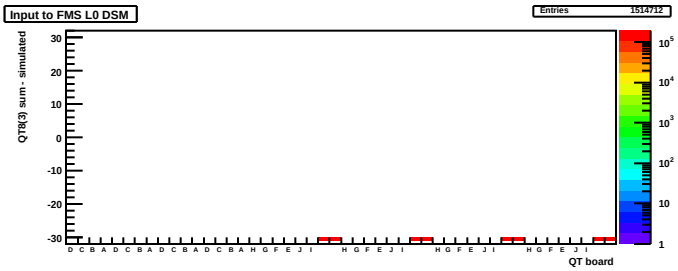

Input to FMS L0 DSM
Entries 9088272
QT8(1) sum
QT board

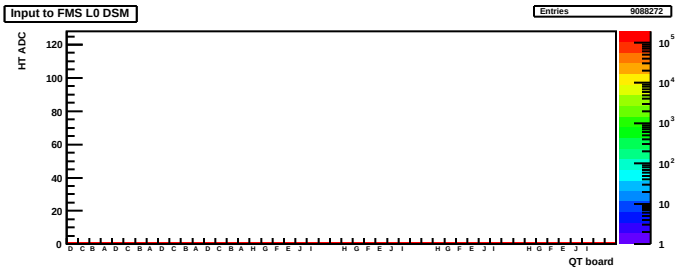

Input to FMS L0 DSM
Entries 1514712
QT8(1) sum - simulated
QT board

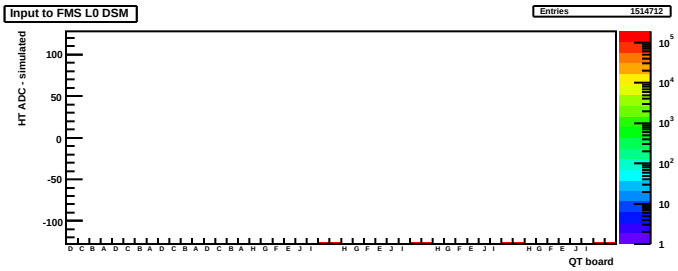

Input to FMS L0 DSM
Entries 9088272
QT8(2) sum
QT board

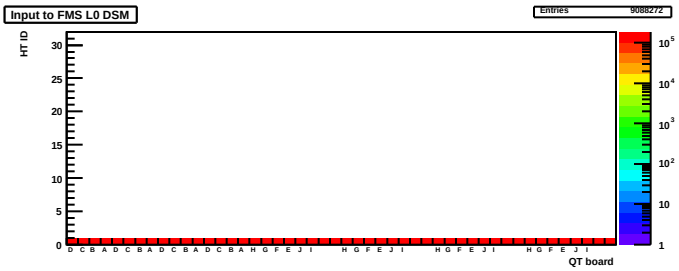

Input to FMS L0 DSM
Entries 1514712
QT8(2) sum - simulated
QT board

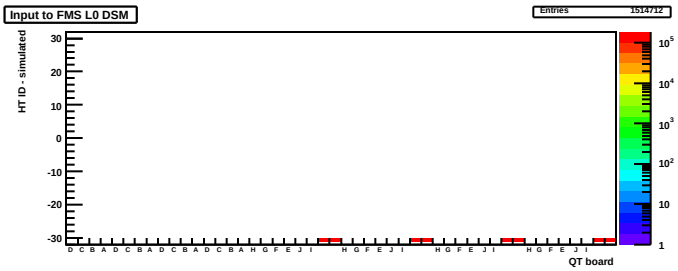

Input to FMS L0 DSM
Entries 9088272
QT8(3) sum
QT board

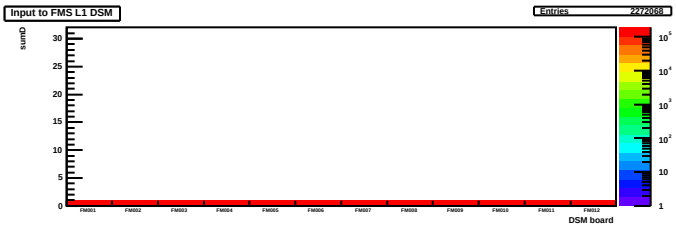

Input to FMS L0 DSM
Entries 1514712
QT8(3) sum - simulated
QT board

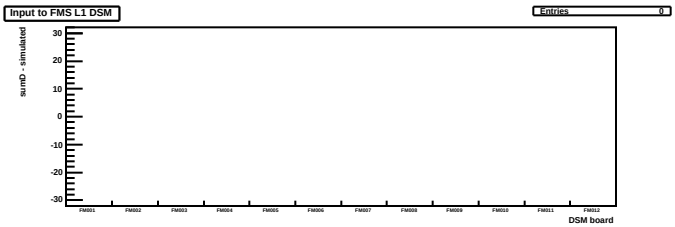

Input to FMS L0 DSM
Entries 9088272
HT ADC
QT board

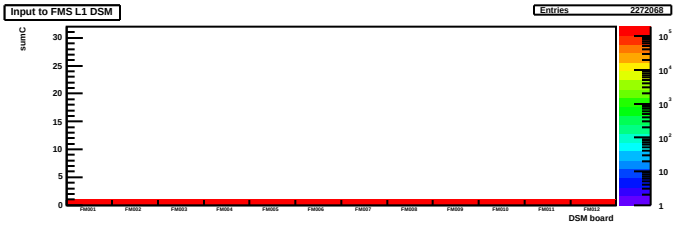

Input to FMS L0 DSM
Entries 1514712
HT ADC - simulated
QT board

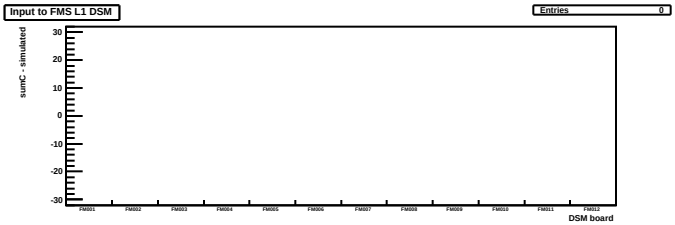

Input to FMS L0 DSM
Entries 9088272
HT ID
QT board

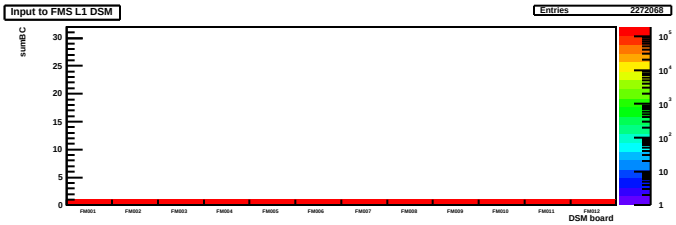

Input to FMS L0 DSM
Entries 1514712
HT ID - simulated
QT board

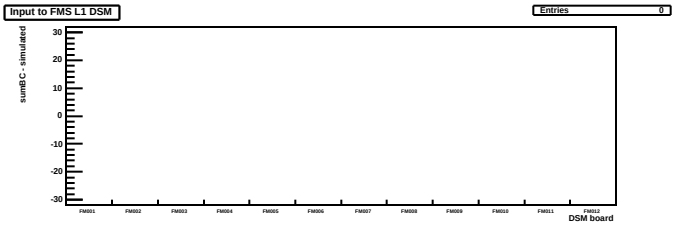

Input to FMS L1 DSM
Entries 2272068
sumD
DSM board

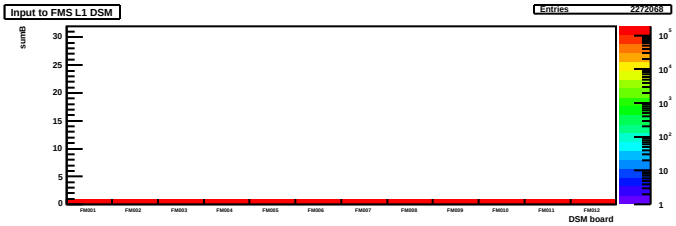

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

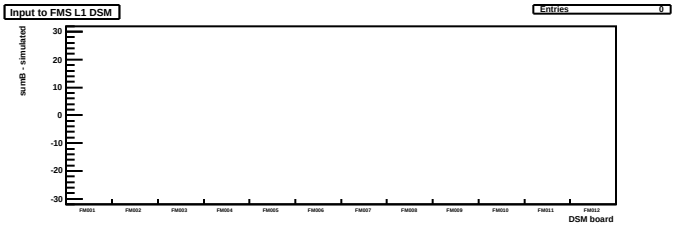

Input to FMS L1 DSM
Entries 2272068
sumC
DSM board

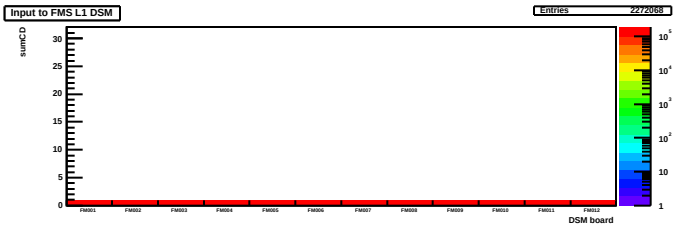

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

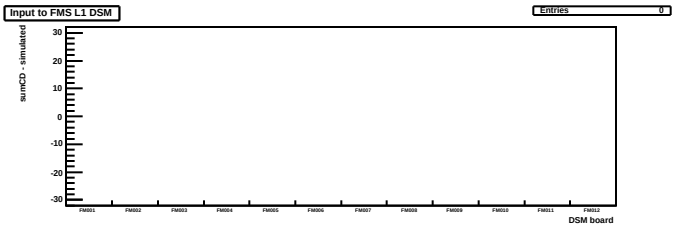

Input to FMS L1 DSM
Entries 2272068
sumBC
DSM board

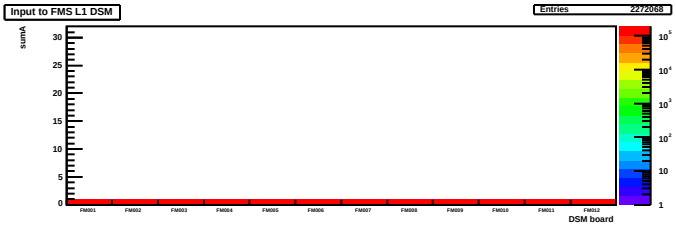

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

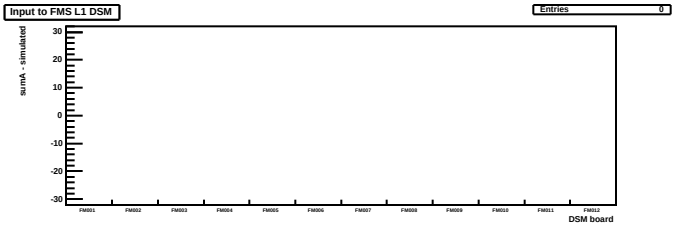

Input to FMS L1 DSM
Entries 2272068
sumB
DSM board

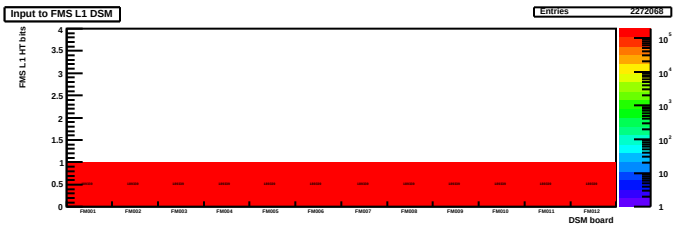

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

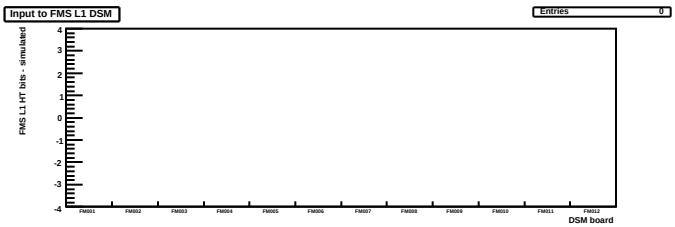

Input to FMS L1 DSM
Entries 2272068
sumCD
DSM board

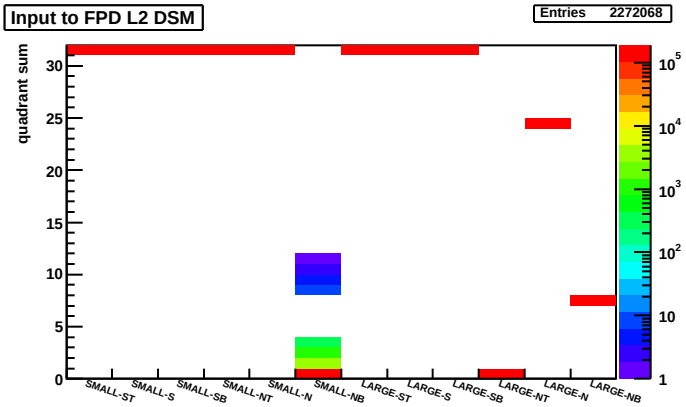

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

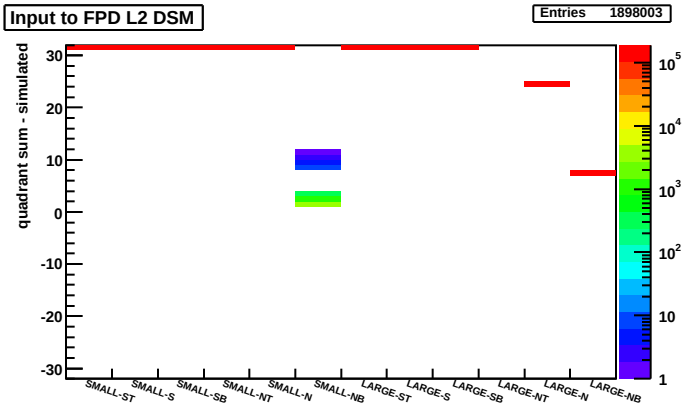

Input to FMS L1 DSM
Entries 2272068
sumA
DSM board

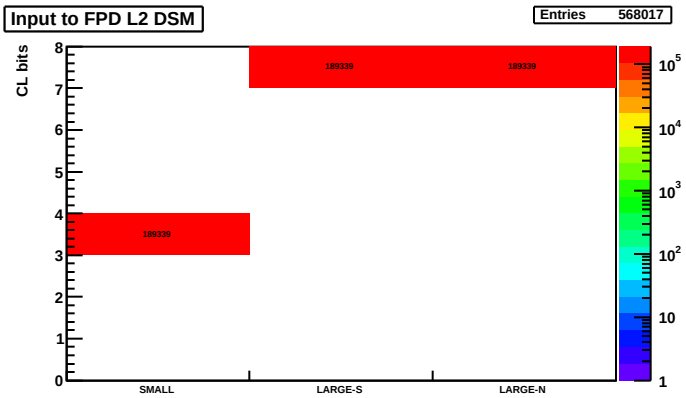

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

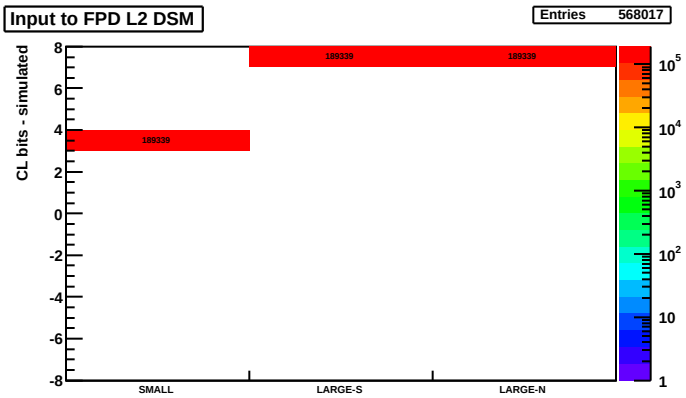

Input to FMS L1 DSM
Entries 2272068
FMS L1 HT bits
DSM board

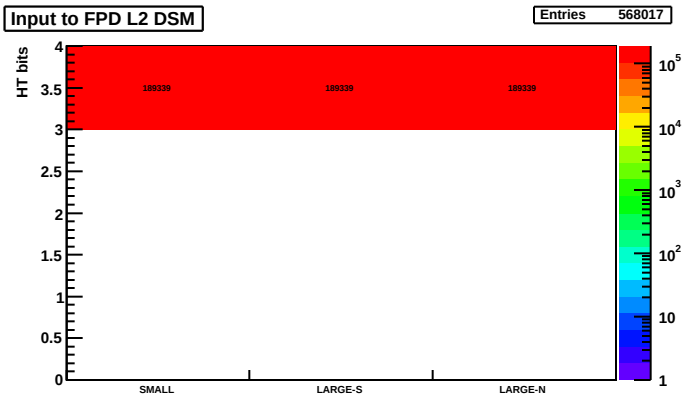

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

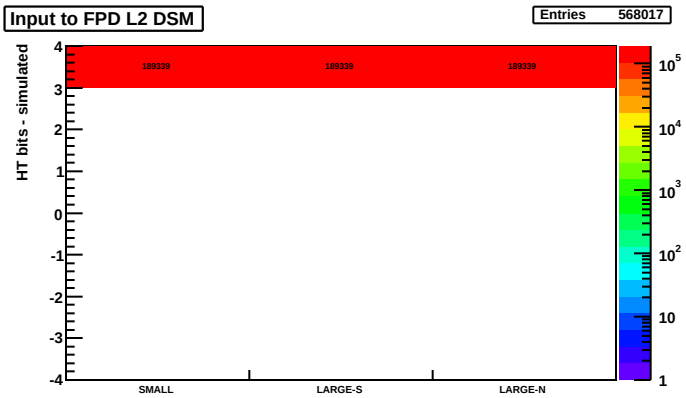

Input to FPD L2 DSM
Entries 2272068
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

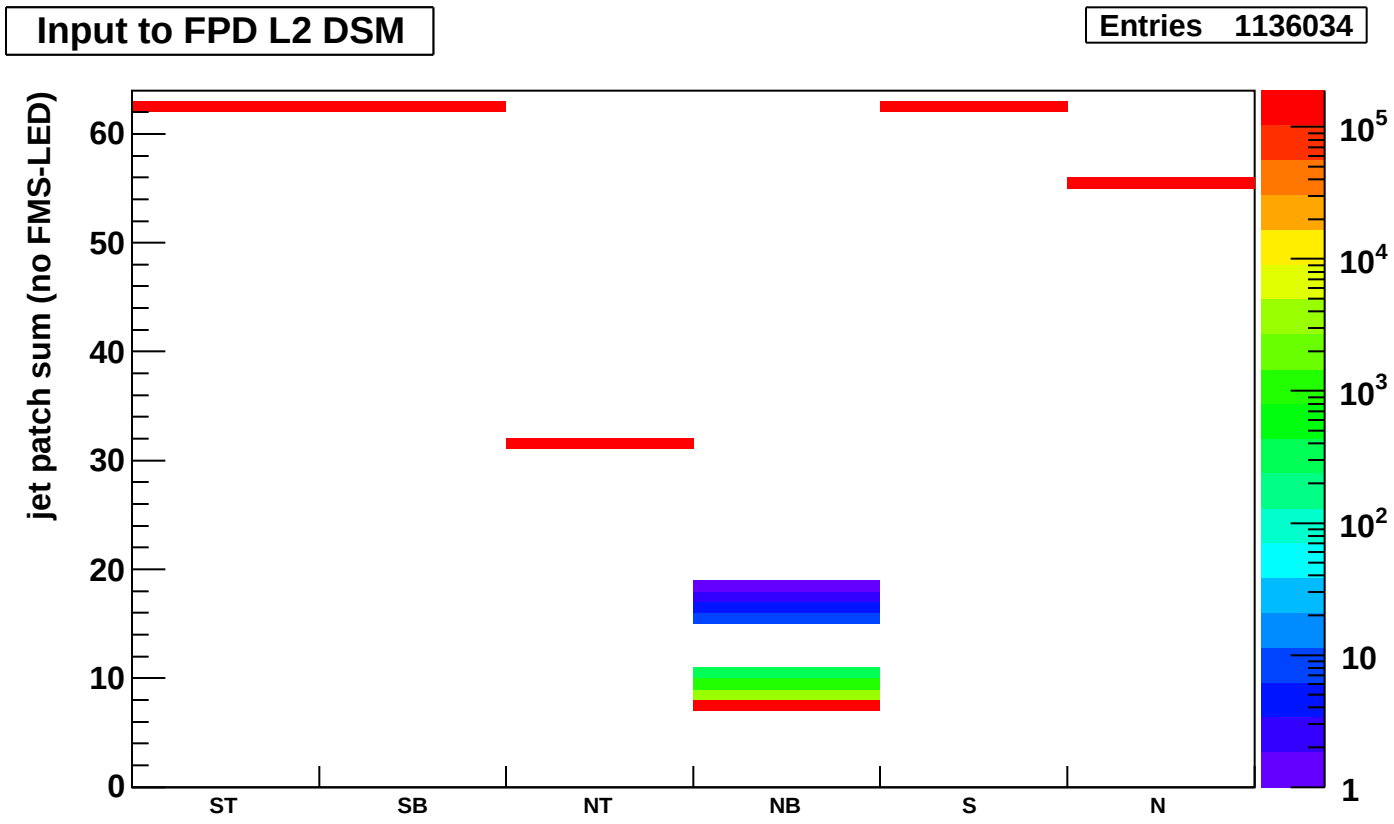

Input to FPD L2 DSM
Entries 1898003
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

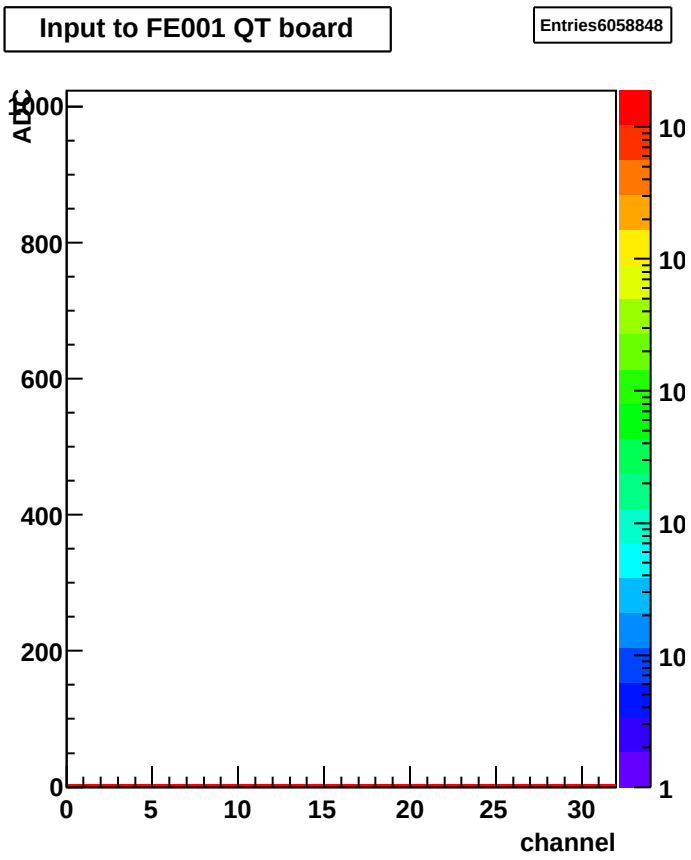

Input to FPD L2 DSM
Entries 568017
CL bits
189339
189339
189339
SMALL
LARGE-S
LARGE-N

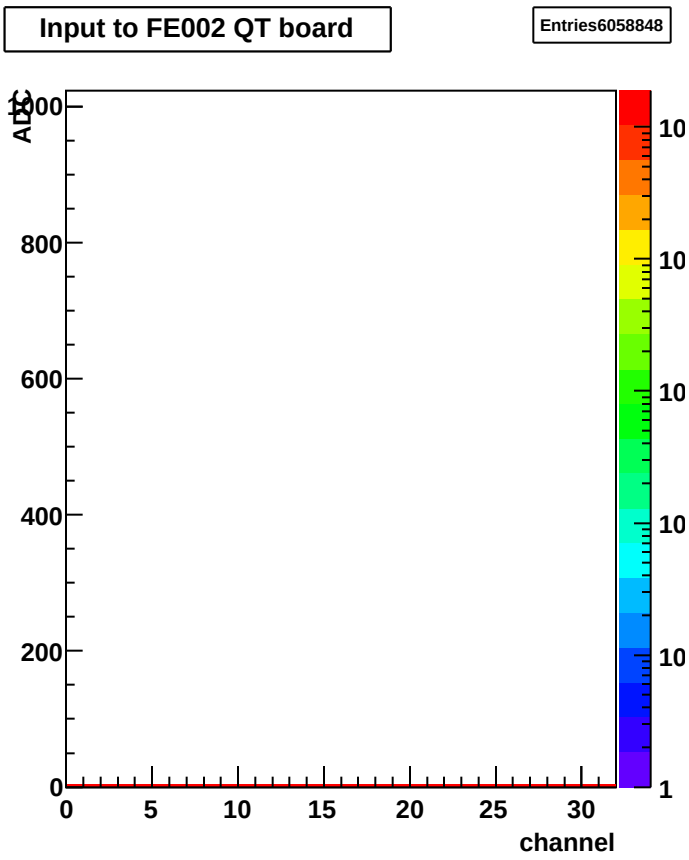

Input to FPD L2 DSM
Entries 568017
CL bits - simulated
189339
189339
189339
SMALL
LARGE-S
LARGE-N

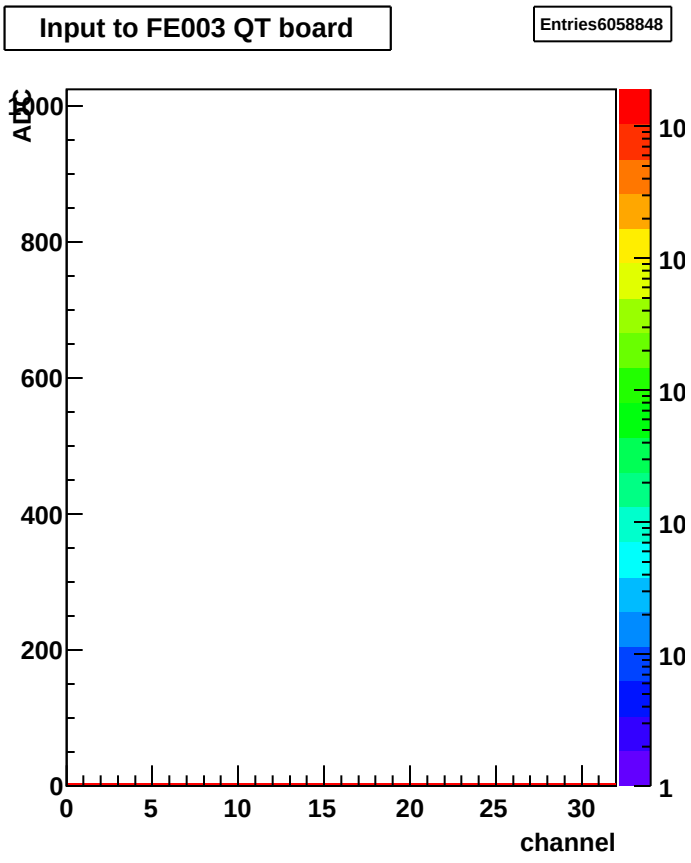

Input to FPD L2 DSM
Entries 568017
HT bits
189339
189339
189339
SMALL
LARGE-S
LARGE-N

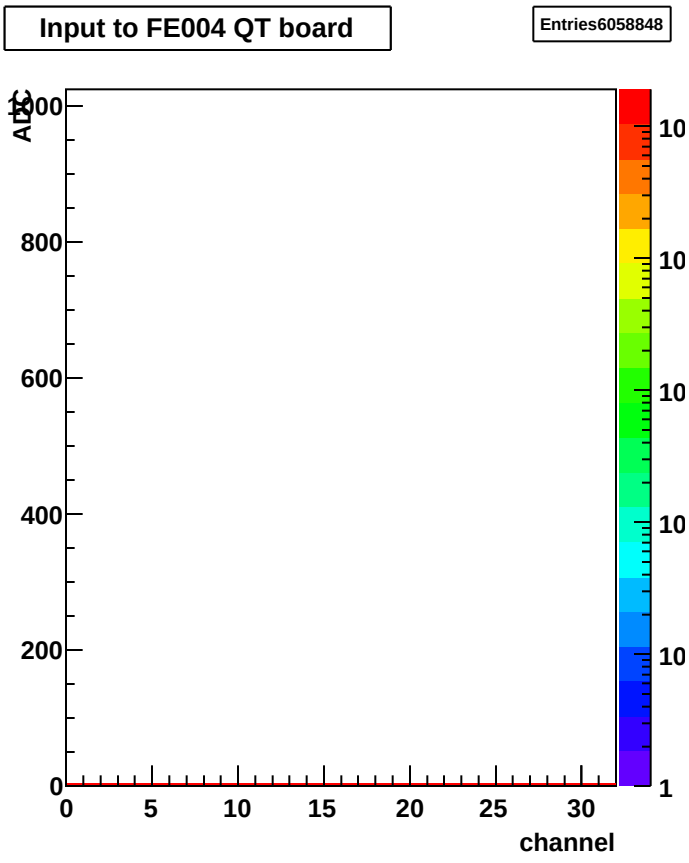

Input to FPD L2 DSM
Entries 568017
HT bits - simulated
189339
189339
189339
SMALL
LARGE-S
LARGE-N

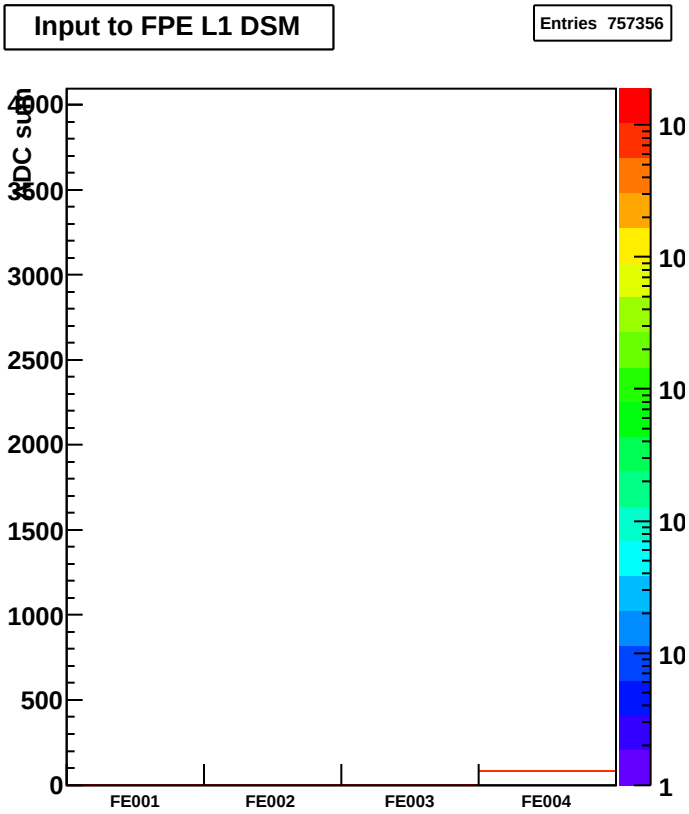

Input to FPD L2 DSM
Entries 1136034
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

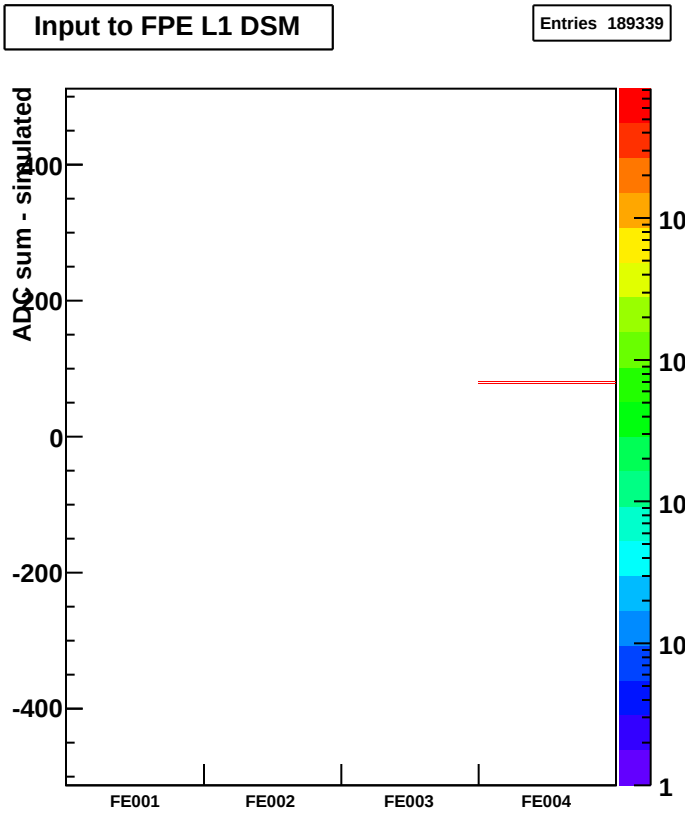

Input to FE001 QT board
Entries6058848
ADC
channel

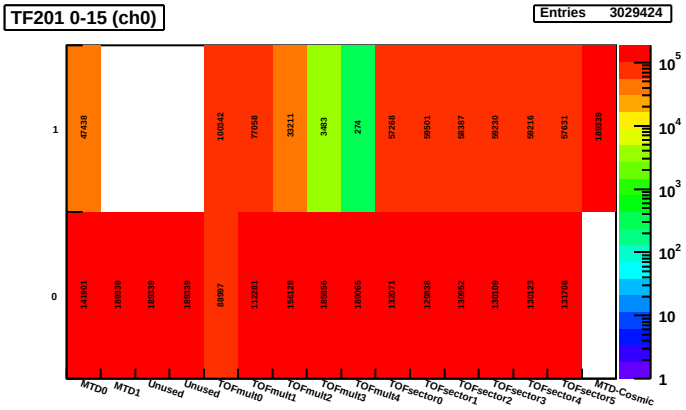

Input to FE002 QT board
Entries6058848
ADC
channel

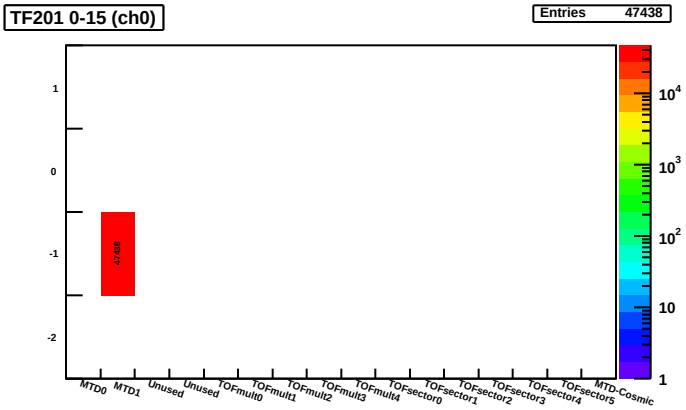

Input to FE003 QT board
Entries6058848
ADC
channel

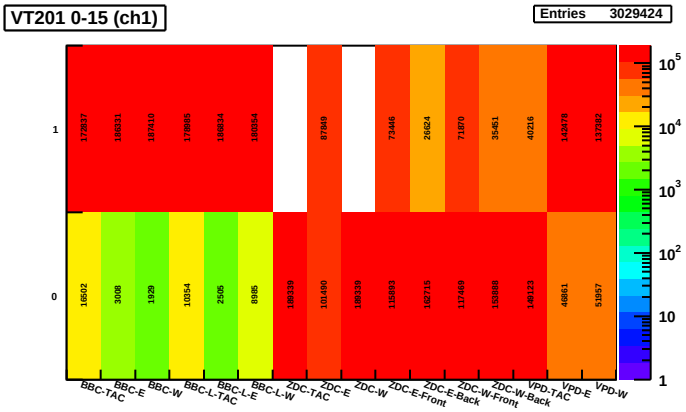

Input to FE004 QT board
Entries6058848
ADC
channel

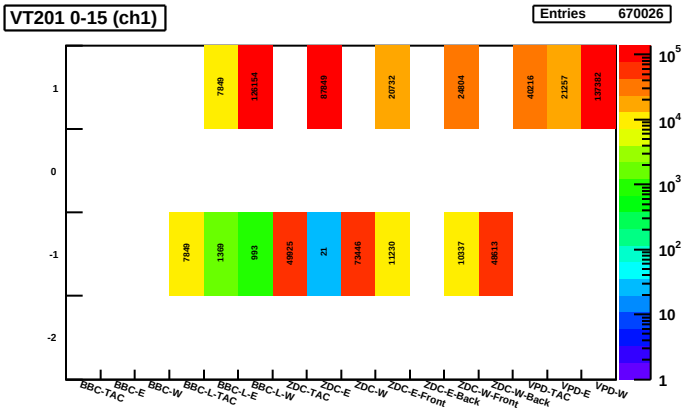

Input to FPE L1 DSM
Entries 757356
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1


Input to FPE L1 DSM
Entries 189339
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 3029424
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 47438
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 3029424
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W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Entries 670026
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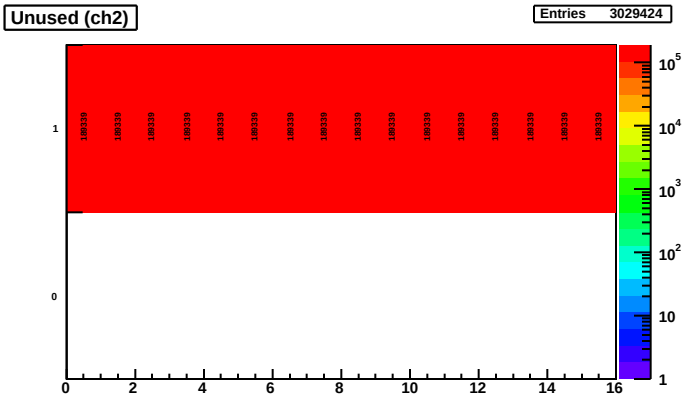
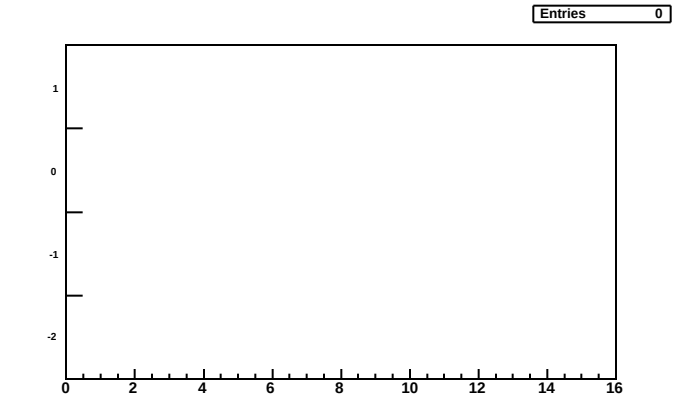
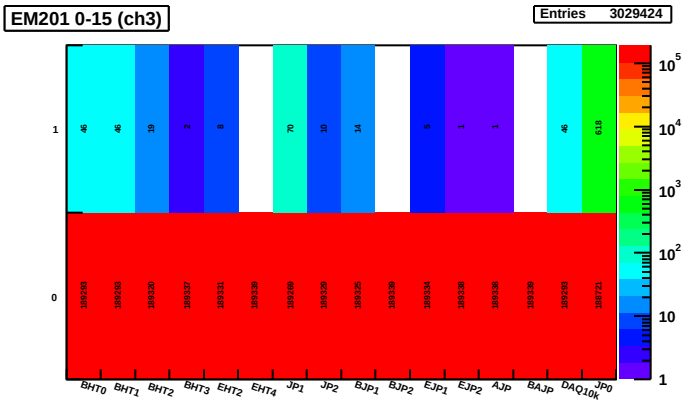

Unused (ch2)
Entries 3029424


Entries 0


EM201 0-15 (ch3)
Entries 3029424
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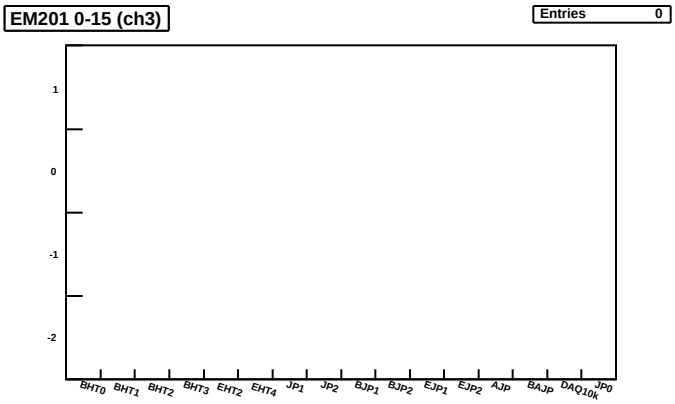
EM201 0-15 (ch3)
Entries 0
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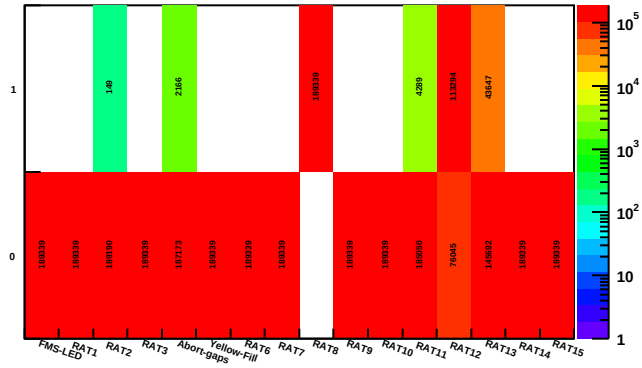
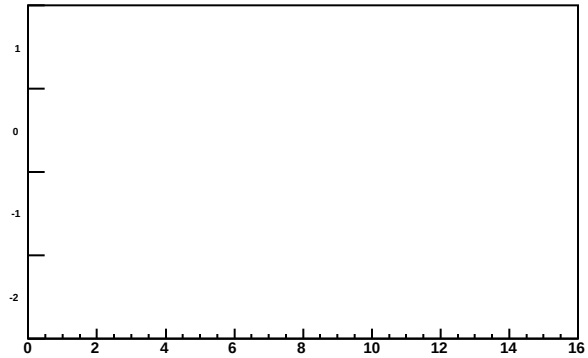
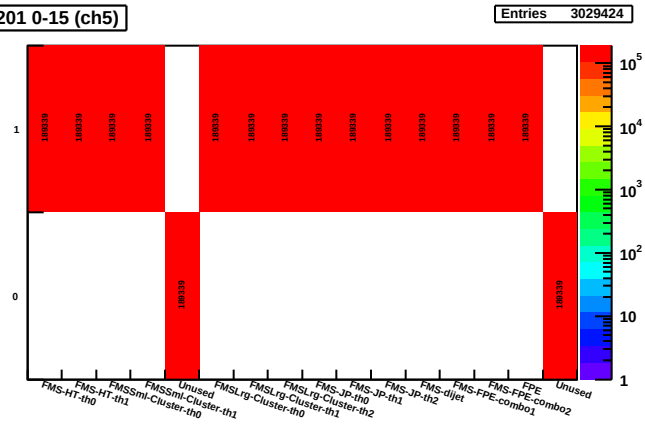
RAT board (ch4)





FP201 0-15 (ch5)



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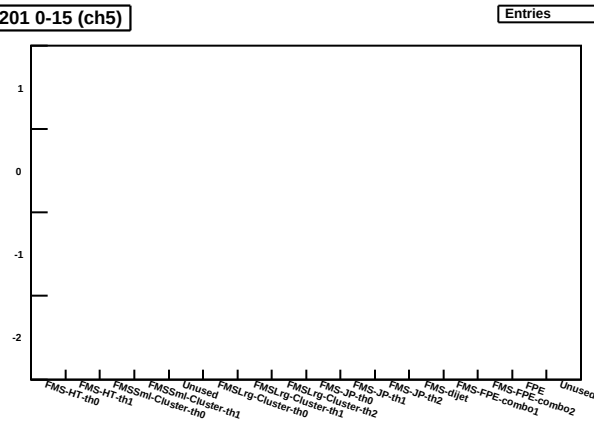
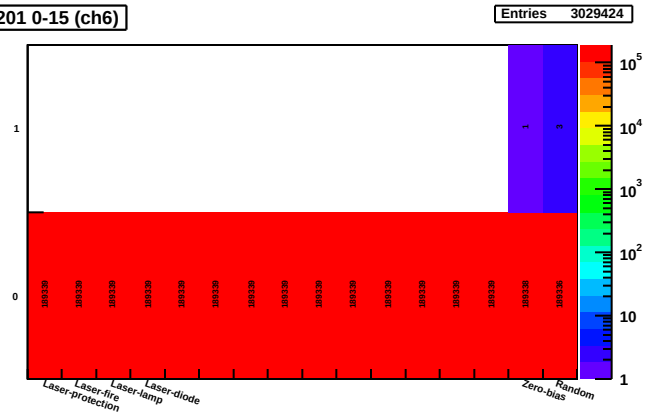
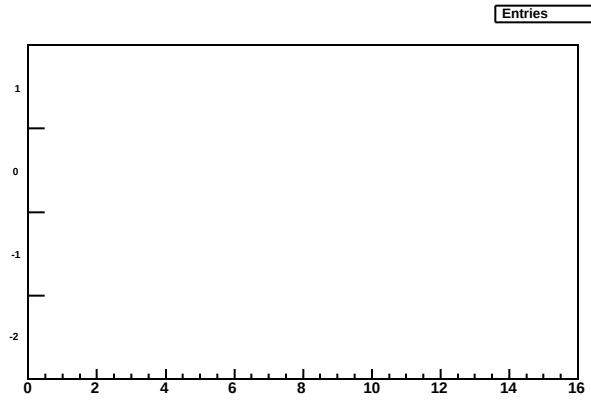
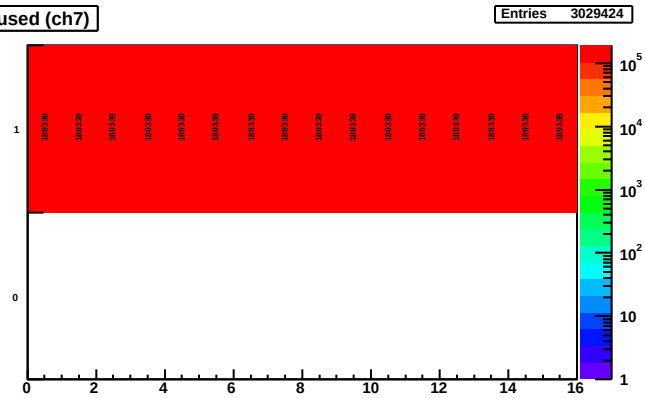
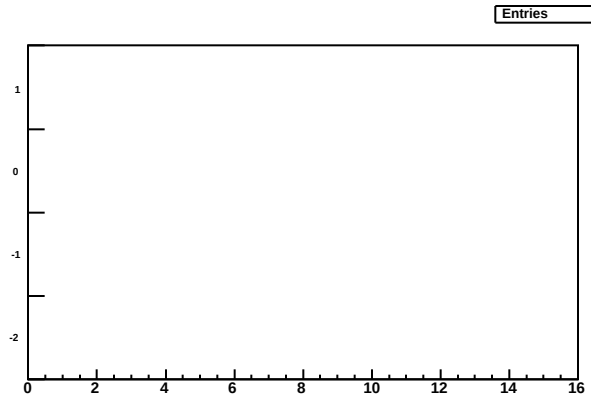


ST201 0-15 (ch6)





Unused (ch7)